TEST REPORT

Applicant:	Hangzhou Lingban Technology Co., Ltd.
Address:	Room 101, Building 8, No.1288, Liangmu Road, Cangqian Street, Yuhang District, Hangzhou, Zhejiang, China
Equipment Type:	Rokid Station 2
Model Name:	RES201
Brand Name:	Rokid
FCC ID:	2AW2R-RES201
Test Standard:	FCC 47 CFR Part 2.1093 (refer section 3.1)
Maximum SAR:	Body (1 g@10mm): 0.69 W/kg Extremity (10 g@0mm): 0.90 W/kg
Sample Arrival Date:	Mar. 27, 2025
Test Date:	Apr. 12, 2025 - Apr. 15, 2025
Date of Issue:	May 09, 2025

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Zhang Jiwei **Checked by:** Xu Rui **Approved by:** Tolan Tu

(Testing Director)

Revision History

Version	Issue Date	Revisions Content
Rev. 01	May 09, 2025	Initial Issue

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☐ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☑ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.

1.3 Test Environment Condition

Ambient Temperature	18℃ to 25℃
Ambient Relative Humidity	30% to 70%

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Hangzhou Lingban Technology Co., Ltd.
Address	Room 101, Building 8, No.1288, Liangmu Road, Cangqian Street, Yuhang District, Hangzhou, Zhejiang, China

2.2 Manufacturer Information

Manufacturer	Hangzhou Lingban Technology Co., Ltd.
Address	Room 101, Building 8, No.1288, Liangmu Road, Cangqian Street, Yuhang District, Hangzhou, Zhejiang, China

2.3 General Description for Equipment under Test (EUT)

EUT Name	Rokid Station 2
Model Name Under Test	RES201
Series Model Name	N/A
Description of Model Name Differentiation	N/A
Hardware Version	Rokid Station 2 MB-V2.0
Software Version	N/A
Dimensions (Approx.)	62.5 * 121.5 * 16mm
Weight (Approx.)	N/A

2.4 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	Rokid
	Model No.	XR-RKD-01
	Serial No.	N/A
	Capacity	Rated Capacity: 5000 mAh/19.3Wh
	Rated Voltage	3.85 V
	Limit Charge Voltage	4.4 V
	Manufacturer	Shanghai BYD Co., Ltd.

2.5 Technical Information

Network and Wireless connectivity	Bluetooth (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40), VHT20/40, 802.11ax(HE20/40) 5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80/160) and 802.11ax(HE20/40/80/160)

The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	2.4G WIFI, 5G WIFI, Bluetooth	
Frequency Range	802.11b/g/ n(HT20/HT40)	2412 MHz ~ 2462 MHz
	VHT20/HT40	2412 MHz ~ 2462 MHz
	802.11ax (HE20/HE40)	2412 MHz ~ 2462 MHz
	802.11a/ n(HT20/HT40) /ac(VHT20/VHT40/ VHT80/VHT160)	5150 MHz ~ 5250 MHz
		5250 MHz ~ 5350 MHz
		5470 MHz ~ 5725 MHz
		5725 MHz ~ 5850 MHz
	802.11ax (HE20/HE40/HE80/ HE160)	5150 MHz ~ 5250 MHz
		5250 MHz ~ 5350 MHz
		5470 MHz ~ 5725 MHz
		5725 MHz ~ 5850 MHz
	Bluetooth	2402 MHz ~ 2480 MHz
Antenna Type	WIFI: PIFA Antenna Bluetooth: PIFA Antenna	
Hotspot Function	N/A	
Exposure Category	General Population/Uncontrolled exposure	
Product Type	Portable Device	
EUT Type	☒ Production unit	☐ Identical prototype

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2.1093	Radiofrequency radiation exposure evaluation: portable devices
2	ANSI/IEEE C95.1-1992	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
3	IEEE Std. 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
4	FCC KDB 447498 D04 v01	447498 D04 Interim General RF Exposure Guidance v01
5	FCC KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
6	FCC KDB 865664 D02 v01r02	RF Exposure Reporting
7	KDB 248227 D01 v02r02	SAR Guidance for IEEE 802.11 (Wi-Fi) Transmitters

3.2 Device Category and SAR Limit

This device belongs to portable device category because its radiating structure is allowed to be used within 20 centimeters of the body of the user.

Limit for General Population/Uncontrolled exposure should be applied for this device, it is 1.6 W/kg as averaged over any 1 gram of tissue.

Table of Exposure Limits:

Body Position	SAR Value (W/Kg)	
	General Population/ Uncontrolled Exposure	Occupational/ ControlledExposure
Whole-Body SAR (averaged over the entire body)	0.08	0.4
Partial-Body SAR (averaged over any 1 gram of tissue)	1.60	8.0
SAR for hands, wrists, feet and ankles (averaged over any 10 grams of tissue)	4.0	20.0

NOTE:

General Population/Uncontrolled Exposure: Locations where there is the exposure of individuals who have no knowledge or control of their exposure. General population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

Occupational/Controlled Exposure: Locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

3.3 Test Result Summary

3.3.1 Highest SAR

Equipment Class	Band	Maximum Scaled SAR (W/kg)		Maximum Report SAR (W/kg)	
		Body (10mm)	Extremity (0mm)	Body (10mm)	Extremity (0mm)
		1g SAR	10g SAR	1g SAR	10g SAR
DTS	2.4G WLAN	0.27	0.58	**0.69**	**0.90**
NII	5.2G WLAN	0.69	0.65		
	5.6G WLAN	0.28	0.33		
	5.8G WLAN	0.52	0.90		
DSS	Bluetooth	0.27	0.69		
Limit (W/kg)		1.6	4.0	1.6	4.0
Verdict		PASS			

3.4 Test Uncertainty

According to KDB 865664 D01, when the highest measured 1 g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis is not required in SAR reports submitted for equipment approval.

The maximum 1 g SAR for the EUT in this report is 0.69 W/kg, which is lower than 1.5 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.
The maximum 10 g SAR for the EUT in this report is 0.90 W/kg, which is lower than 3.75 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.

4 MEASUREMENT SYSTEM

4.1 Specific Absorption Rate (SAR) Definition

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$\mathbf{SAR} = \frac{\boldsymbol{d}}{\mathbf{dt}}\left(\frac{\boldsymbol{dW}}{\mathbf{dm}}\right) = \frac{\boldsymbol{d}}{\mathbf{dt}}\left(\frac{\boldsymbol{dW}}{\boldsymbol{\rho}\mathbf{dv}}\right)$$

SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

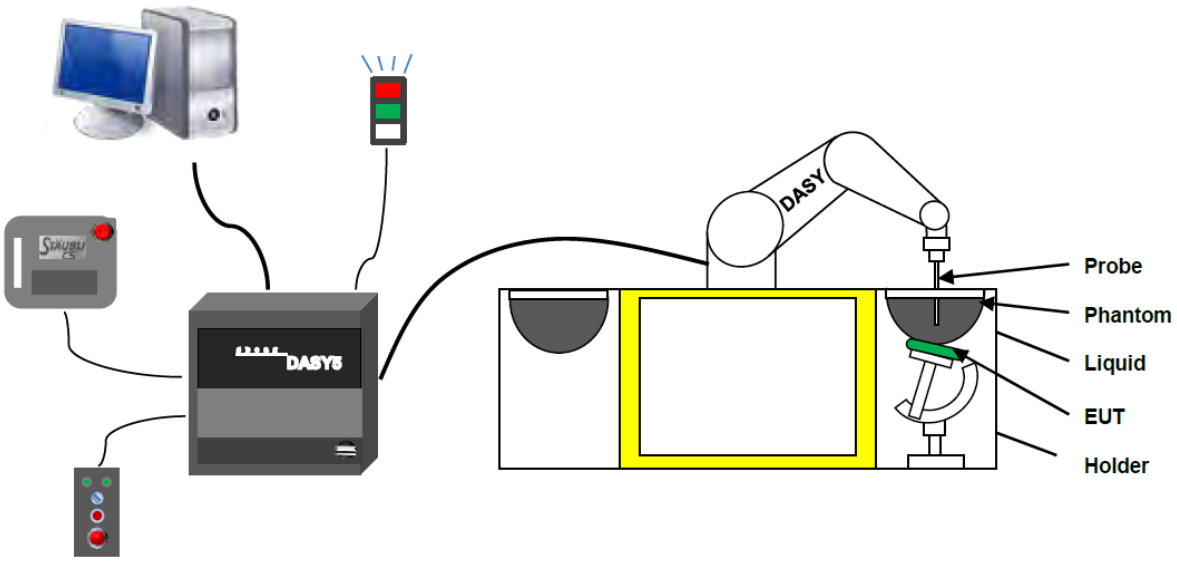
$$\mathbf{SAR} = \frac{\boldsymbol{\sigma}\mathbf{E}^{\mathbf{2}}}{\boldsymbol{\rho}}$$

Where: σ is the conductivity of the tissue,

ρis the mass density of the tissue and E is the RMS electrical field strength.

4.2 DASY SAR System

4.2.1 DASY SAR System Diagram



The DASY5 system for performing compliance tests consists of the following items:

1. A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).
2. A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
3. A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
4. A unit to operate the optical surface detector which is connected to the EOC.
5. The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY5 measurement server.
6. The DASY5 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation.
7. DASY5 software and SEMCAD data evaluation software.
8. Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.
9. The generic twin phantom enabling the testing of left-hand and right-hand usage.
10. The device holder for handheld mobile phones.
11. Tissue simulating liquid mixed according to the given recipes.
12. System validation dipoles allowing to validate the proper functioning of the system.

4.2.2 Robot

The Dasy SAR system uses the high precision robots. Symmetrical design with triangular core Built-in optical fiber for surface detection system For the 6-axis controller system, Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents). The robot series have many features that are important for our application:

- High precision
  (repeatability ±0.02 mm)
- High reliability
  (industrial design)
- Low maintenance costs
  (virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements
  (brush less synchron motors; no stepper motors)
- Low ELF interference
  (motor control _elds shielded via the closed metallic construction shields)

4.2.3 E-Field Probe

The probe is specially designed and calibrated for use in liquids with high permittivities for the measurements the Specific Dosimetric E-Field Probe EX3DV4-SN: 7510 with following specifications is used.

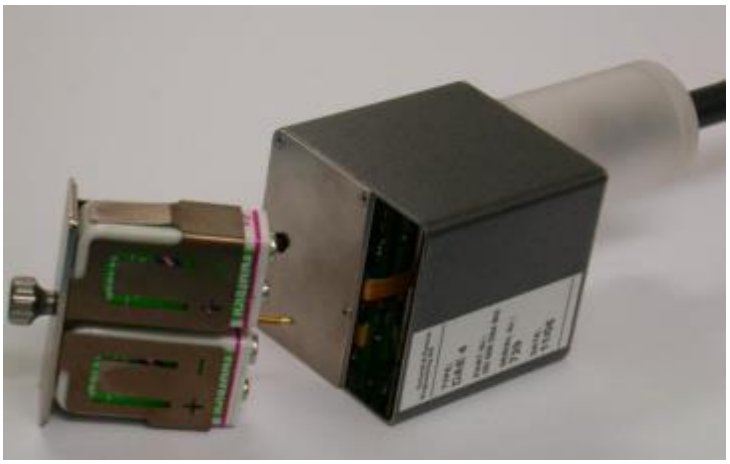
Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection systemBuilt-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to 6 GHz; Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ; ± 0.4 dB in HSL (rotation normal to probe axis)
Dynamic range	5 µW/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 337 mm (Tip: 9 mm) Tip diameter: 2.5 mm (Body: 10 mm) Distance from probe tip to dipole centers: 1.0 mm
Application	General dosimetry up to 3 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms (EX3DV4)

E-Field Probe Calibration Process

Probe calibration is realized, in compliance with CENELEC EN 62209-1/-2 and IEEE 1528 std, with CALISAR, Antennessa proprietary calibration system. The calibration is performed with the EN 62209-1/2 annexe technique using reference guide at the five frequencies.

4.2.4 Data Acquisition Electronics

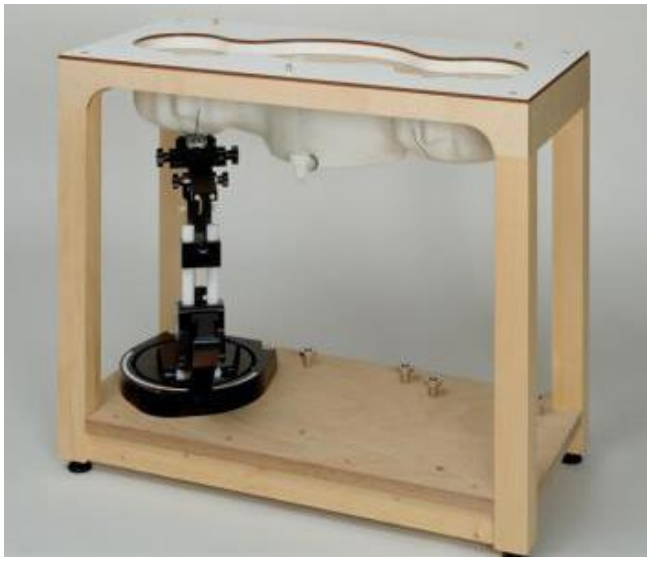
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.



- Input Impedance: 200MOhm
- The Inputs: Symmetrical and Floating
- Commom Mode Rejection: Above 80dB

4.2.5 Phantoms

For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The phantom is a polyurethane shell integrated in a wooden table. The thickness of the phantom amounts to 2mm +/- 0.2mm. It enables the dosimetric evaluation of left and right phone usage and includes an additional flat phantom part for the simplified performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.



- Left hand
- Right hand
- Flat phantom

Photo of Phantom SN1576

Serial Number	Material	Length	Height
SN 1576 SAM	Vinylester, glass fiber reinforced	1000	500

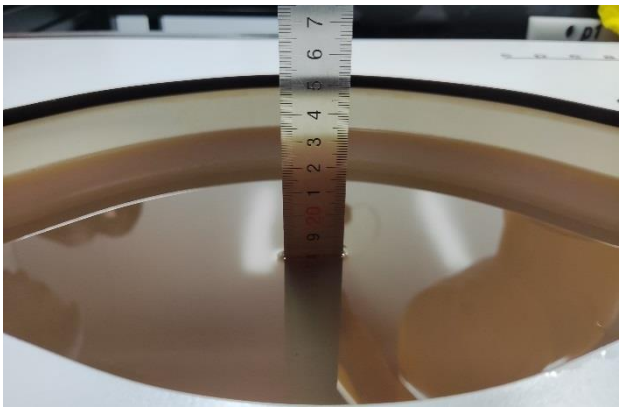
4.2.6 Device Holder

The DASY5 device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65°. The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. This device holder is used for standard mobile phones or PDA"s only. If necessary an additional support of polystyrene material is used. Larger DUT"s (e.g. notebooks) cannot be tested using this device holder. Instead a support of bigger polystyrene cubes and thin polystyrene plates is used to position the DUT in all relevant positions to find and measure spots with maximum SAR values. Therefore those devices are normally only tested at the flat part of the SAM.

The positioning system allows obtaining cheek and tilting position with a very good accuracy. Incompliance with CENELEC, the tilt angle uncertainty is lower than 1°.

4.2.7 Simulating Liquid

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 5%.

Head Liquid Depth	Body Liquid Depth
	

The following table gives the recipes for tissue simulating liquid.

TSL	Manufacturer / Model	Freq Range (MHz)	Main Ingredients
Head WideBand	SPEAG HBBL600-10000V6	600-10000	Ethanediol, Sodium petroleum sulfonate, Hexylene Glycol / 2-Methyl-pentane-2.4-diol, Alkoxylated alcohol

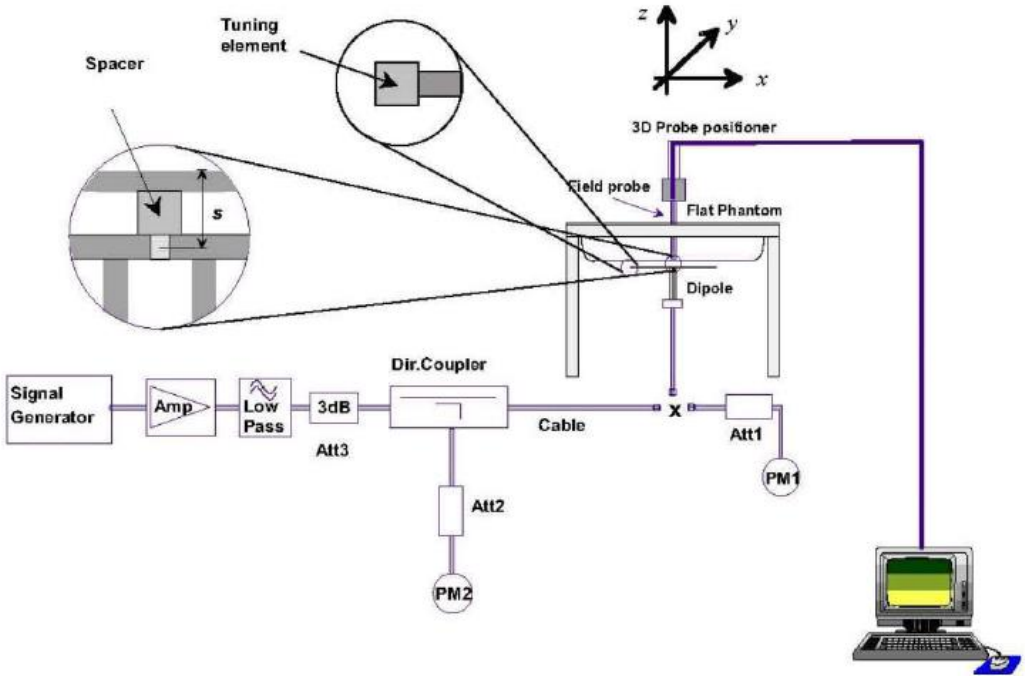
5 SYSTEM VERIFICATION

5.1 Purpose of System Check

The system performance check verifies that the system operates within its specifications. System and operator errors can be detected and corrected. It is recommended that the system performance check be performed prior to any usage of the system in order to guarantee reproducible results. The system performance check uses normal SAR measurements in a simplified setup with a well characterized source. This setup was selected to give a high sensitivity to all parameters that might fail or vary over time. The system check does not intend to replace the calibration of the components, but indicates situations where the system uncertainty is exceeded due to drift or failure.

5.2 System Check Setup

In the simplified setup for system evaluation, the EUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:



6 TEST POSITION CONFIGURATIONS

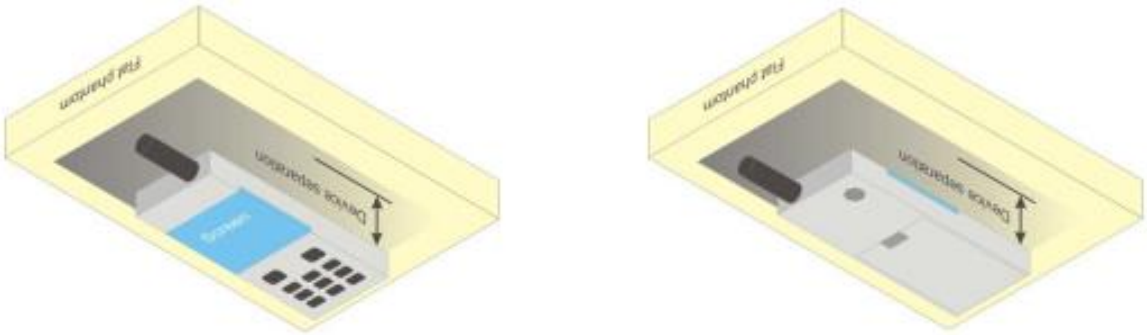
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

6.1 Body-worn Position Conditions

Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB 447498 are used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode. When the reported SAR for a body-worn accessory.

Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics. All body-worn accessories containing metallic components are tested in conjunction with the host device.

Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice only operations in its normal and expected use conditions, testing of data mode for body-worn compliance is not required. A conservative minimum test separation distance for supporting off-the-shelf body-worn accessories that may be acquired by users of consumer handsets is used to test for body-worn accessory SAR compliance. This distance is determined by the handset manufacturer, according to the requirements of Supplement C 01-01. Devices that are designed to operate on the body of users using lanyards and straps, or without requiring additional body-worn accessories, will be tested using a conservative minimum test separation distance <= 5 mm to support compliance.



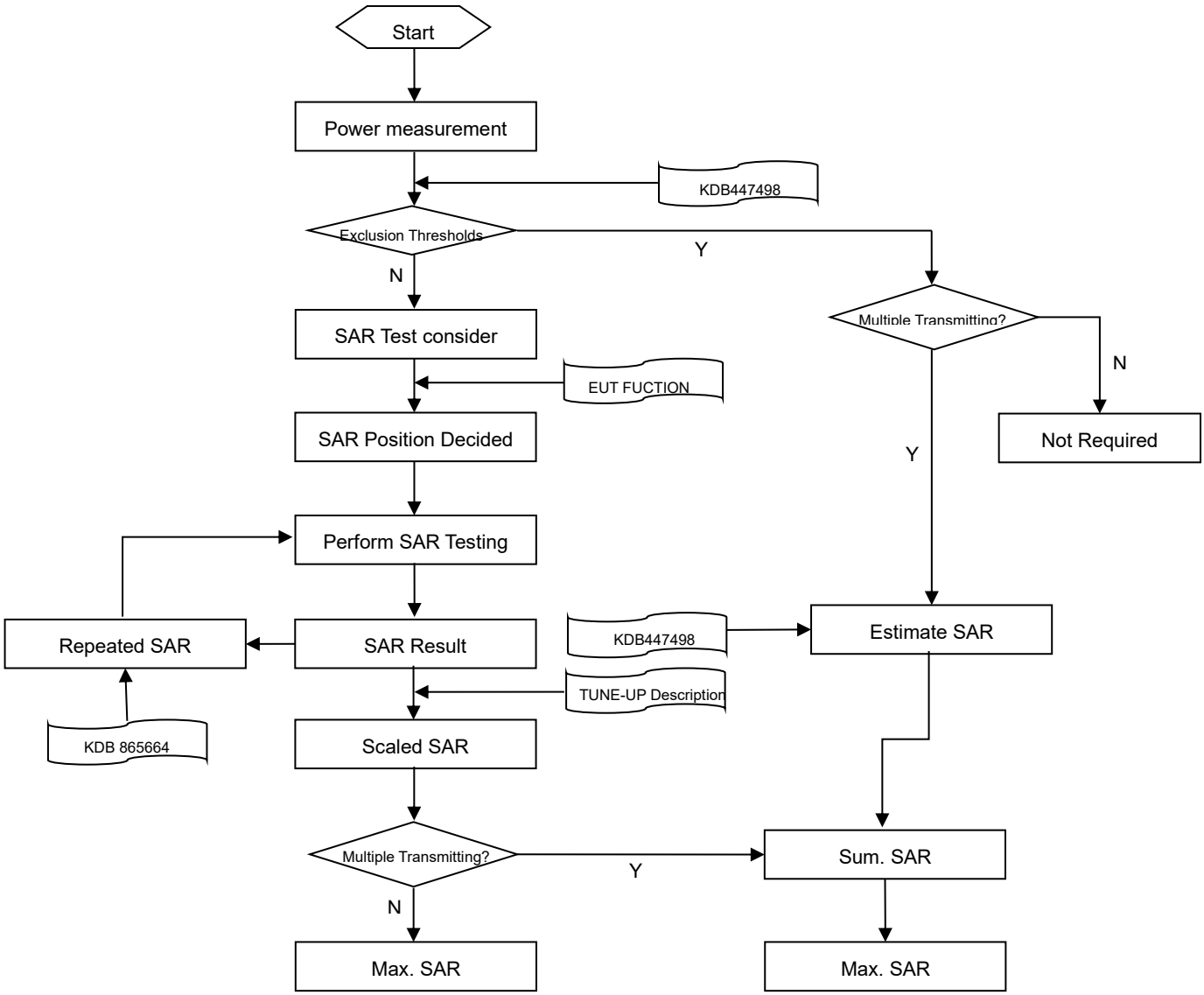
6.2 Product Specific 10g Exposure Consideration

According with FCC KDB 648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, unless it is confirmed otherwise through KDB inquiries, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance;

The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at $\leqslant$ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

7 MEASUREMENT PROCEDURE

7.1 Measurement Process Diagram



7.2 SAR Scan General Requirement

Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Boththe probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1 g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std 1528-2013.

<table>
<tr><th colspan="3"></th><th>≤3GHz</th><th>>3GHz</th></tr>
<tr><td colspan="3">Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5±1 mm</td><td>½·δ·ln(2)±0.5 mm</td></tr>
<tr><td colspan="3">Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30°±1°</td><td>20°±1°</td></tr>
<tr><td colspan="3" rowspan="2">Maximum area scan spatial resolution: Δx Area , Δy Area</td><td>≤ 2 GHz: ≤ 15 mm
2 – 3 GHz: ≤ 12 mm</td><td>3–4 GHz: ≤ 12 mm
4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.</td></tr>
<tr><td colspan="3">Maximum zoom scan spatial resolution: Δx Zoom , Δy Zoom</td><td>≤ 2 GHz: ≤ 8 mm
2 –3 GHz: ≤ 5 mm*</td><td>3–4 GHz: ≤ 5 mm*
4 – 6 GHz: ≤ 4 mm*</td></tr>
<tr><td rowspan="7">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2" rowspan="3">uniform grid: Δz Zoom (n)</td><td rowspan="3">≤ 5 mm</td><td>3–4 GHz: ≤ 4 mm</td></tr>
<tr><td>4–5 GHz: ≤ 3 mm</td></tr>
<tr><td>5–6 GHz: ≤ 2 mm</td></tr>
<tr><td rowspan="4">graded grid</td><td rowspan="2">Δz Zoom (1): between 1st two points closest to phantom surface</td><td rowspan="2">≤ 4 mm</td><td>3–4 GHz: ≤ 3 mm</td></tr>
<tr><td>4–5 GHz: ≤ 2.5 mm</td></tr>
<tr><td>5–6 GHz: ≤ 2 mm</td></tr>
<tr><td>Δz Zoom (n>1): between subsequent points</td><td colspan="2">≤ 1.5·Δz Zoom (n-1)</td></tr>
<tr><td rowspan="3">Minimum zoom scan volume</td><td colspan="2" rowspan="3">x, y, z</td><td rowspan="3">≥30 mm</td><td>3–4 GHz: ≥ 28 mm</td></tr>
<tr><td>4–5 GHz: ≥ 25 mm</td></tr>
<tr><td>5–6 GHz: ≥ 22 mm</td></tr>
<tr><td colspan="5">Note:
1. δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.
2. * When zoom scan is required and the reported SAR from the area scan based 1 g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</td></tr>
</table>

7.3 Measurement Procedure

The following steps are used for each test position

a. Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
b. Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
c. Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
d. Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 *32 mm is assessed by measuring 5 or 8 * 5 or 8*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

7.4 Area & Zoom Scan Procedure

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. Area scan and zoom scan resolution setting follows KDB 865664 D01v01r04 quoted below.

When the 1 g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.

8 CONDUCTED RF OUPUT POWER

8.1 WIFI

8.1.1 2.4G WIFI-ANT22-power

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4	802.11b	1	2412	**11.73**	13.00	YES
		6	2437	11.60	13.00	NO
		11	2462	11.42	13.00	NO
	802.11g	1	2412	10.93	12.50	NO
		6	2437	11.23	13.00	NO
		11	2462	11.31	13.00	NO
	802.11n(HT20)	1	2412	10.55	12.50	NO
		6	2437	10.98	12.50	NO
		11	2462	10.86	12.50	NO
	802.11n(HT40)	3	2422	11.48	13.00	NO
		6	2437	11.62	13.00	NO
		9	2452	11.64	13.00	NO
	VHT20	1	2412	10.62	12.50	NO
		6	2437	10.93	12.50	NO
		11	2462	10.96	12.50	NO
	VHT40	3	2422	11.52	13.00	NO
		6	2437	11.20	13.00	NO
		9	2452	11.71	13.00	NO
	802.11ax(HE20)	1	2412	10.77	12.50	NO
		6	2437	11.07	13.00	NO
		11	2462	11.13	13.00	NO
	802.11ax(HE40)	3	2422	11.15	13.00	NO
		6	2437	11.48	13.00	NO
		9	2452	11.35	13.00	NO

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

1) The largest channel bandwidth configuration is selected between the multiple configurations in a frequency band with the same maximum tune-up output power.

2) When multiple transmission modes (802.11b/g/n/VHT/ax) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11b is chosen over 802.11g, and 802.11g chosen over 802.11n.

3) According KDB 247228, when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, OFDM SAR test is not required.

Adjusted SAR = 0.160* (19.95mW/19.95mW) = 0.160 W/Kg, so 2.4G OFDM SAR test is not required.

8.1.2 2.4G WIFI-ANT23-power

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4	802.11b	1	2412	**12.24**	13.00	YES
		6	2437	11.82	13.00	NO
		11	2462	11.44	13.00	NO
	802.11g	1	2412	11.74	13.00	NO
		6	2437	11.85	13.00	NO
		11	2462	11.39	13.00	NO
	802.11n(HT20)	1	2412	11.49	13.00	NO
		6	2437	11.51	13.00	NO
		11	2462	11.01	13.00	NO
	802.11n(HT40)	3	2422	11.85	13.00	NO
		6	2437	11.75	13.00	NO
		9	2452	11.70	13.00	NO
	VHT20	1	2412	11.50	13.00	NO
		6	2437	11.49	13.00	NO
		11	2462	11.06	13.00	NO
	VHT40	3	2422	11.79	13.00	NO
		6	2437	11.77	13.00	NO
		9	2452	11.64	13.00	NO
	802.11ax(HE20)	1	2412	11.56	13.00	NO
		6	2437	11.62	13.00	NO
		11	2462	11.21	13.00	NO
	802.11ax(HE40)	3	2422	11.56	13.00	NO
		6	2437	11.52	13.00	NO
		9	2452	11.34	13.00	NO

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

1) The largest channel bandwidth configuration is selected between the multiple configurations in a frequency band with the same maximum tune-up output power.

2) When multiple transmission modes (802.11b/g/n/VHT/ax) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11b is chosen over 802.11g, and 802.11g chosen over 802.11n.

3) According KDB 247228, when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, OFDM SAR test is not required.

Adjusted SAR = 0.120* (19.95mW/19.95mW) = 0.120 W/Kg, so 2.4G OFDM SAR test is not required.

8.1.3 2.4G WIFI-ANT MIMO- power

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4	802.11b	1	2412	**15.00**	16.00	YES
		6	2437	14.72	16.00	NO
		11	2462	14.44	16.00	NO
	802.11g	1	2412	14.36	16.00	NO
		6	2437	14.56	16.00	NO
		11	2462	14.36	16.00	NO
	802.11n(HT20)	1	2412	14.06	16.00	NO
		6	2437	14.26	16.00	NO
		11	2462	13.95	15.50	NO
	802.11n(HT40)	3	2422	14.68	16.00	NO
		6	2437	14.70	16.00	NO
		9	2452	14.68	16.00	NO
	VHT20	1	2412	14.09	16.00	NO
		6	2437	14.23	16.00	NO
		11	2462	14.02	16.00	NO
	VHT40	3	2422	14.67	16.00	NO
		6	2437	14.50	16.00	NO
		9	2452	14.69	16.00	NO
	802.11ax(HE20)	1	2412	14.19	16.00	NO
		6	2437	14.36	16.00	NO
		11	2462	14.18	16.00	NO
	802.11ax(HE40)	3	2422	14.37	16.00	NO
		6	2437	14.51	16.00	NO
		9	2452	14.36	16.00	NO

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

1) The largest channel bandwidth configuration is selected between the multiple configurations in a frequency band with the same maximum tune-up output power.

2) When multiple transmission modes (802.11b/g/n/VHT/ax) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11b is chosen over 802.11g, and 802.11g chosen over 802.11n.

3) According KDB 247228, when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, OFDM SAR test is not required.

Adjusted SAR = 0.268* (39.81mW/39.81mW) = 0.268 W/Kg, so 2.4G OFDM SAR test is not required.

8.1.4 5G WIFI-ANT22-power

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2	802.11a	36	5180	11.07	13.00	NO
		44	5220	11.59	13.00	NO
		48	5240	12.00	13.00	NO
	802.11n(HT20)	36	5180	11.39	13.00	NO
		44	5220	11.54	13.00	NO
		48	5240	11.62	13.00	NO
	802.11n(HT40)	38	5190	12.29	13.00	NO
		46	5230	12.50	13.00	NO
	802.11ac(VHT20)	36	5180	11.29	13.00	NO
		44	5220	11.52	13.00	NO
		48	5240	11.55	13.00	NO
	802.11ac(VHT40)	38	5190	12.46	13.00	NO
		46	5230	12.40	13.00	NO
	802.11ac(VHT80)	42	5210	12.37	13.00	NO
	802.11ac(VHT160)	50	5250	10.35	12.00	NO
	802.11ax(HE20)	36	5180	11.88	13.00	NO
		44	5220	11.99	13.00	NO
		48	5240	12.10	13.00	NO
	802.11ax(HE40)	38	5190	12.27	13.00	NO
		46	5230	12.45	13.00	NO
	802.11ax(HE80)	42	5210	12.35	13.00	NO
	802.11ax(HE160)	50	5250	10.32	12.00	NO
5.3	802.11a	52	5260	11.87	13.00	NO
		60	5300	11.57	13.00	NO
		64	5320	11.63	13.00	NO
	802.11n(HT20)	52	5260	11.49	13.00	NO
		60	5300	11.20	13.00	NO
		64	5320	11.31	13.00	NO
	802.11n(HT40)	54	5270	12.28	13.00	NO
		62	5310	12.10	13.00	NO
	802.11ac(VHT20)	52	5260	11.44	13.00	NO
		60	5300	11.16	13.00	NO
		64	5320	11.27	13.00	NO
	802.11ac(VHT40)	54	5270	12.25	13.00	NO
		62	5310	12.07	13.00	NO
	802.11ac(VHT80)	58	5290	**12.08**	13.00	YES

	802.11ax(HE20)	52	5260	11.94	13.00	NO
		60	5300	11.66	13.00	NO
		64	5320	11.77	13.00	NO
	802.11ax(HE40)	54	5270	12.22	13.00	NO
		62	5310	12.10	13.00	NO
	802.11ax(HE80)	58	5290	12.06	13.00	NO
5.6	802.11a	100	5500	11.27	13.00	NO
		116	5580	11.32	13.00	NO
		140	5700	10.98	12.50	NO
	802.11n(HT20)	100	5500	10.90	12.50	NO
		116	5580	11.03	13.00	NO
		140	5700	10.60	12.50	NO
	802.11n(HT40)	102	5510	11.75	13.00	NO
		118	5590	12.00	13.00	NO
		134	5670	10.97	12.50	NO
	802.11ac(VHT20)	100	5500	10.88	12.50	NO
		116	5580	11.01	13.00	NO
		140	5700	10.59	12.50	NO
	802.11ac(VHT40)	102	5510	11.74	13.00	NO
		118	5590	11.99	13.00	NO
		134	5670	10.97	12.50	NO
	802.11ac(VHT80)	106	5530	11.74	13.00	NO
		122	5610	11.74	13.00	NO
	802.11ac(VHT160)	114	5570	**11.36**	13.00	YES
	802.11ax(HE20)	100	5500	11.37	13.00	NO
		116	5580	11.43	13.00	NO
		140	5700	11.18	13.00	NO
	802.11ax(HE40)	102	5510	11.77	13.00	NO
		118	5590	12.05	13.00	NO
		134	5670	10.98	12.50	NO
	802.11ax(HE80)	106	5530	11.67	13.00	NO
		122	5610	11.68	13.00	NO
	802.11ax(HE160)	114	5570	11.40	13.00	NO
5.8	802.11a	149	5745	13.37	15.00	NO
		157	5785	13.77	15.00	NO
		165	5825	14.01	15.00	NO
	802.11n(HT20)	149	5745	12.96	14.50	NO
		157	5785	13.35	15.00	NO
		165	5825	13.60	15.00	NO

	802.11n(HT40)	151	5755	14.18	15.00	NO
		159	5795	14.45	15.00	NO
	802.11ac(VHT20)	149	5745	12.90	14.50	NO
		157	5785	13.33	15.00	NO
		165	5825	13.59	15.00	NO
	802.11ac(VHT40)	151	5755	14.16	15.00	NO
		159	5795	14.44	15.00	NO
	802.11ac(VHT80)	155	5775	**13.90**	15.00	YES
	802.11ax(HE20)	149	5745	13.24	15.00	NO
		157	5785	13.59	15.00	NO
		165	5825	13.88	15.00	NO
	802.11ax(HE40)	151	5755	13.86	15.00	NO
		159	5795	14.15	15.00	NO
	802.11ax(HE80)	155	5775	13.84	15.00	NO
Note: When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.						

8.1.5 5G WIFI-ANT23-power

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2	802.11a	36	5180	12.07	13.00	NO
		44	5220	11.20	13.00	NO
		48	5240	10.31	12.00	NO
	802.11n(HT20)	36	5180	11.63	13.00	NO
		44	5220	10.85	12.00	NO
		48	5240	10.02	12.00	NO
	802.11n(HT40)	38	5190	12.39	13.00	NO
		46	5230	11.16	13.00	NO
	802.11ac(VHT20)	36	5180	11.61	13.00	NO
		44	5220	10.79	12.00	NO
		48	5240	9.96	11.50	NO
	802.11ac(VHT40)	38	5190	12.26	13.00	NO
		46	5230	11.09	13.00	NO
	802.11ac(VHT80)	42	5210	**11.66**	13.00	YES
	802.11ac(VHT160)	50	5250	13.00	13.00	NO
	802.11ax(HE20)	36	5180	11.66	13.00	NO
		44	5220	10.82	12.00	NO
		48	5240	10.01	12.00	NO
	802.11ax(HE40)	38	5190	11.98	13.00	NO
		46	5230	10.80	12.00	NO
	802.11ax(HE80)	42	5210	11.62	13.00	NO
	802.11ax(HE160)	50	5250	12.98	13.00	NO
5.3	802.11a	52	5260	9.18	10.00	NO
		60	5300	8.25	10.00	NO
		64	5320	7.92	9.50	NO
	802.11n(HT20)	52	5260	8.85	10.00	NO
		60	5300	7.81	9.00	NO
		64	5320	7.46	9.00	NO
	802.11n(HT40)	54	5270	9.20	10.00	NO
		62	5310	8.46	10.00	NO
	802.11ac(VHT20)	52	5260	8.83	10.00	NO
		60	5300	7.78	9.00	NO
		64	5320	7.51	9.00	NO
	802.11ac(VHT40)	54	5270	9.10	10.00	NO
		62	5310	8.34	10.00	NO
	802.11ac(VHT80)	58	5290	8.38	10.00	NO

	802.11ax(HE20)	52	5260	8.90	10.00	NO
		60	5300	7.73	9.00	NO
		64	5320	7.66	9.00	NO
	802.11ax(HE40)	54	5270	8.83	10.00	NO
		62	5310	8.11	10.00	NO
	802.11ax(HE80)	58	5290	8.37	10.00	NO
5.6	802.11a	100	5500	12.68	14.00	NO
		116	5580	13.23	14.00	NO
		140	5700	13.35	14.00	NO
	802.11n(HT20)	100	5500	12.32	14.00	NO
		116	5580	12.88	14.00	NO
		140	5700	13.04	14.00	NO
	802.11n(HT40)	102	5510	13.32	14.00	NO
		118	5590	13.53	14.00	NO
		134	5670	13.15	14.00	NO
	802.11ac(VHT20)	100	5500	12.34	14.00	NO
		116	5580	12.88	14.00	NO
		140	5700	13.04	14.00	NO
	802.11ac(VHT40)	102	5510	13.32	14.00	NO
		118	5590	13.54	14.00	NO
		134	5670	13.11	14.00	NO
	802.11ac(VHT80)	106	5530	13.04	14.00	NO
		122	5610	13.01	14.00	NO
	802.11ac(VHT160)	114	5570	**12.73**	14.00	YES
	802.11ax(HE20)	100	5500	12.42	14.00	NO
		116	5580	13.04	14.00	NO
		140	5700	13.12	14.00	NO
	802.11ax(HE40)	102	5510	12.97	14.00	NO
		118	5590	13.15	14.00	NO
		134	5670	12.78	14.00	NO
	802.11ax(HE80)	106	5530	12.98	14.00	NO
		122	5610	12.96	14.00	NO
	802.11ax(HE160)	114	5570	12.73	14.00	NO
5.8	802.11a	149	5745	14.94	16.00	NO
		157	5785	15.03	16.00	NO
		165	5825	14.90	16.00	NO
	802.11n(HT20)	149	5745	14.59	16.00	NO
		157	5785	14.66	16.00	NO
		165	5825	14.55	16.00	NO

	802.11n(HT40)	151	5755	15.50	16.00	NO
		159	5795	15.56	16.00	NO
	802.11ac(VHT20)	149	5745	14.55	16.00	NO
		157	5785	14.65	16.00	NO
		165	5825	14.54	16.00	NO
	802.11ac(VHT40)	151	5755	15.48	16.00	NO
		159	5795	15.53	16.00	NO
	802.11ac(VHT80)	155	5775	**15.15**	16.00	YES
	802.11ax(HE20)	149	5745	14.78	16.00	NO
		157	5785	14.81	16.00	NO
		165	5825	14.73	16.00	NO
	802.11ax(HE40)	151	5755	15.19	16.00	NO
		159	5795	15.27	16.00	NO
	802.11ax(HE80)	155	5775	15.10	16.00	NO
Note: When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.						

8.1.6 5G WIFI-ANT MIMO- power

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2	802.11a	36	5180	14.61	16.00	NO
		44	5220	14.41	16.00	NO
		48	5240	14.25	16.00	NO
	802.11n(HT20)	36	5180	14.52	16.00	NO
		44	5220	14.22	16.00	NO
		48	5240	13.90	15.00	NO
	802.11n(HT40)	38	5190	15.35	16.00	NO
		46	5230	14.89	16.00	NO
	802.11ac(VHT20)	36	5180	14.46	16.00	NO
		44	5220	14.18	16.00	NO
		48	5240	13.84	15.00	NO
	802.11ac(VHT40)	38	5190	15.37	16.00	NO
		46	5230	14.80	16.00	NO
	802.11ac(VHT80)	42	5210	**15.04**	16.00	YES
	802.11ac(VHT160)	50	5250	14.88	16.00	NO
	802.11ax(HE20)	36	5180	14.78	16.00	NO
		44	5220	14.45	16.00	NO
		48	5240	14.19	16.00	NO
	802.11ax(HE40)	38	5190	15.14	16.00	NO
		46	5230	14.71	16.00	NO
	802.11ax(HE80)	42	5210	15.01	16.00	NO
	802.11ax(HE160)	50	5250	14.86	16.00	NO
5.3	802.11a	52	5260	13.74	15.00	NO
		60	5300	13.23	15.00	NO
		64	5320	13.17	15.00	NO
	802.11n(HT20)	52	5260	13.38	15.00	NO
		60	5300	12.84	14.00	NO
		64	5320	12.81	14.00	NO
	802.11n(HT40)	54	5270	14.02	15.00	NO
		62	5310	13.66	15.00	NO
	802.11ac(VHT20)	52	5260	13.34	15.00	NO
		60	5300	12.80	14.00	NO
		64	5320	12.80	14.00	NO
	802.11ac(VHT40)	54	5270	13.96	15.00	NO
		62	5310	13.60	15.00	NO
	802.11ac(VHT80)	58	5290	13.62	15.00	NO

	802.11ax(HE20)	52	5260	13.69	15.00	NO
		60	5300	13.14	15.00	NO
		64	5320	13.19	15.00	NO
	802.11ax(HE40)	54	5270	13.86	15.00	NO
		62	5310	13.56	15.00	NO
	802.11ax(HE80)	58	5290	13.61	15.00	NO
5.6	802.11a	100	5500	15.04	16.50	NO
		116	5580	15.39	16.50	NO
		140	5700	15.34	16.50	NO
	802.11n(HT20)	100	5500	14.68	16.50	NO
		116	5580	15.06	16.50	NO
		140	5700	15.00	16.50	NO
	802.11n(HT40)	102	5510	15.62	16.50	NO
		118	5590	15.84	16.50	NO
		134	5670	15.21	16.50	NO
	802.11ac(VHT20)	100	5500	14.68	16.50	NO
		116	5580	15.06	16.50	NO
		140	5700	15.00	16.50	NO
	802.11ac(VHT40)	102	5510	15.61	16.50	NO
		118	5590	15.84	16.50	NO
		134	5670	15.18	16.50	NO
	802.11ac(VHT80)	106	5530	15.45	16.50	NO
		122	5610	15.43	16.50	NO
	802.11ac(VHT160)	114	5570	**15.11**	16.50	YES
	802.11ax(HE20)	100	5500	14.94	16.50	NO
		116	5580	15.32	16.50	NO
		140	5700	15.27	16.50	NO
	802.11ax(HE40)	102	5510	15.42	16.50	NO
		118	5590	15.65	16.50	NO
		134	5670	14.98	16.50	NO
	802.11ax(HE80)	106	5530	15.38	16.50	NO
		122	5610	15.38	16.50	NO
	802.11ax(HE160)	114	5570	15.13	16.50	NO
5.8	802.11a	149	5745	17.24	18.50	NO
		157	5785	17.46	18.50	NO
		165	5825	17.49	18.50	NO
	802.11n(HT20)	149	5745	16.86	18.50	NO
		157	5785	17.06	18.50	NO
		165	5825	17.11	18.50	NO

	802.11n(HT40)	151	5755	17.90	18.50	NO
		159	5795	18.05	18.50	NO
	802.11ac(VHT20)	149	5745	16.81	18.50	NO
		157	5785	17.05	18.50	NO
		165	5825	17.10	18.50	NO
	802.11ac(VHT40)	151	5755	17.88	18.50	NO
		159	5795	18.03	18.50	NO
	802.11ac(VHT80)	155	5775	**17.58**	18.50	YES
	802.11ax(HE20)	149	5745	17.09	18.50	NO
		157	5785	17.25	18.50	NO
		165	5825	17.34	18.50	NO
	802.11ax(HE40)	151	5755	17.59	18.50	NO
		159	5795	17.76	18.50	NO
	802.11ax(HE80)	155	5775	17.53	18.50	NO
Note: When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.						

8.2 Bluetooth

8.2.1 Bluetooth-ANT22

Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require
GFSK	0	2402	9.97	11.00	NO
	39	2441	9.32	11.00	NO
	78	2480	**10.24**	11.00	YES
π/4-DQPSK	0	2402	9.09	11.00	NO
	39	2441	8.45	11.00	NO
	78	2480	9.35	11.00	NO
8-DPSK	0	2402	9.32	11.00	NO
	39	2441	8.70	11.00	NO
	78	2480	9.57	11.00	NO
BLE-1Mbps	0	2402	5.56	6.00	NO
	19	2440	4.49	6.00	NO
	38	2480	5.84	6.00	NO
BLE-2Mbps	1	2404	5.45	6.00	NO
	19	2440	4.83	6.00	NO
	38	2478	5.63	6.00	NO

Note 1: Since bluetooth BR mode is the maximum output power mode，SAR measurements were performed with test software using DH5 modulation, and SAR measurement is not required for the EDR and LE. When the secondary mode is ≤ ¼ dB higher than the primary mode.

8.2.2 Bluetooth-ANT23

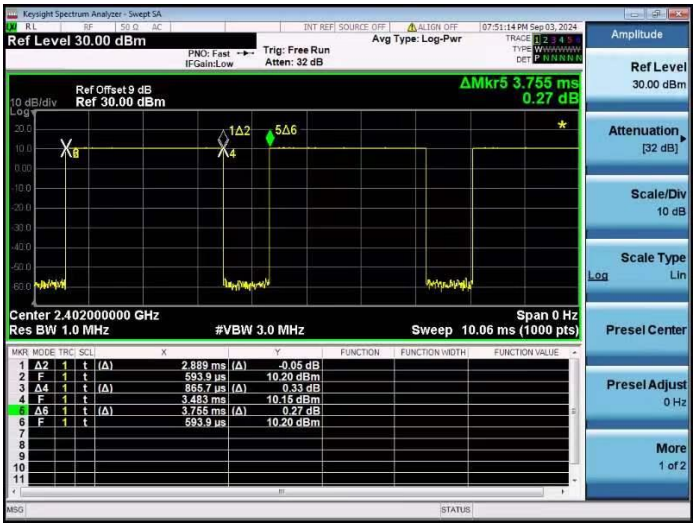
Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require
GFSK	0	2402	**13.26**	13.50	YES
	39	2441	12.42	13.50	NO
	78	2480	12.89	13.50	NO
π/4-DQPSK	0	2402	12.46	13.50	NO
	39	2441	11.61	13.50	NO
	78	2480	12.01	13.50	NO
8-DPSK	0	2402	12.71	13.50	NO
	39	2441	11.85	13.50	NO
	78	2480	12.25	13.50	NO
BLE-1Mbps	0	2402	9.29	10.00	NO
	19	2440	8.97	10.00	NO
	38	2480	8.30	10.00	NO
BLE-2Mbps	1	2404	9.50	10.00	NO
	19	2440	9.32	10.00	NO
	38	2478	8.68	10.00	NO

Note 1: Since bluetooth BR mode is the maximum output power mode，SAR measurements were performed with test software using DH5 modulation, and SAR measurement is not required for the EDR and LE. When the secondary mode is ≤ ¼ dB higher than the primary mode.

The Bluetooth duty cycle is 76.94 % as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 100%, therefore the actual duty cycle will be scaled up to 100% for Bluetooth reported SAR calculation.

Duty Cycle

Bluetooth-GFSK



9 TEST EXCLUSION CONSIDERATION

For antenna location and support bands please refer the document “BL-SZ2531139-AI EUT internal photo.pdf”.

Antenna	Description	Support Bands
Antenna 22	WiFi 2.4G TX Antenna WiFi 5G TX Antenna Bluetooth TX Antenna	WiFi 2.4G WiFi 5G Bluetooth
Antenna 23	WiFi 2.4G TX Antenna WiFi 5G TX Antenna Bluetooth TX Antenna	WiFi 2.4G WiFi 5G Bluetooth

Antenna	Front Side(mm)	Back Side(mm)	Left Edge(mm)	Right Edge(mm)	Top Edge(mm)	Bottom Edge(mm)
Ant.22	5.0	5.0	0.5	47.0	81.0	15.0
Ant.23	5.0	5.0	47.0	0.5	85.5	15.0

9.1 SAR Test Exclusion Consideration Table

According with FCC KDB 447498 D04, Appendix B, The SAR-based exemption formula applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold Pth (mW), this Device SAR test configurations consider as following:

This host is a notebook computer, under normal use the RF exposure scenarios are shown in the table below:

RF exposure Position	RF exposure scenarios
Front Side	Body&Extremity
Back Side	Body&Extremity
Left Edge	Body&Extremity
Right Edge	Body&Extremity
Top Edge	Body&Extremity
Bottom Edge	Body&Extremity

Antenna 22

Test Position Configurations	Mode	Bluetooth	2.4G	5.2&3G	5.6G	5.8G
Calculated Frequency(MHz)		2480	2462	5320	5710	5825
Front Side	Distance to User (mm)	5.00				
	Max. Peak Power (dBm)	11.00	13.00	13.00	13.00	15.00
	Max. Peak Power (mW)	12.59	19.95	19.95	19.95	31.62
	Exclusion Threshold (mW)	2.72	2.73	1.47	1.39	1.37
	SAR Test Required	Yes	Yes	Yes	Yes	Yes
Back Side	Distance to User (mm)	5.00				
	Max. Peak Power (dBm)	11.00	13.00	13.00	13.00	15.00
	Max. Peak Power (mW)	12.59	19.95	19.95	19.95	31.62
	Exclusion Threshold (mW)	2.72	2.73	1.47	1.39	1.37
	SAR Test Required	Yes	Yes	Yes	Yes	Yes
Left Edge	Distance to User (mm)	0.50				
	Max. Peak Power (dBm)	11.00	13.00	13.00	13.00	15.00
	Max. Peak Power (mW)	12.59	19.95	19.95	19.95	31.62
	Exclusion Threshold (mW)	0.03	0.03	0.01	0.01	0.01
	SAR Test Required	Yes	Yes	Yes	Yes	Yes
Right Edge	Distance to User (mm)	47.00				
	Max. Peak Power (dBm)	11.00	13.00	13.00	13.00	15.00
	Max. Peak Power (mW)	12.59	19.95	19.95	19.95	31.62
	Exclusion Threshold (mW)	193.97	194.41	152.58	149.22	148.29
	SAR Test Required	No	No	No	No	No
Top Edge	Distance to User (mm)	81.00				
	Max. Peak Power (dBm)	11.00	13.00	13.00	13.00	15.00
	Max. Peak Power (mW)	12.59	19.95	19.95	19.95	31.62
	Exclusion Threshold (mW)	547.02	547.80	470.92	464.43	462.61
	SAR Test Required	No	No	No	No	No
Bottom Edge	Distance to User (mm)	15.00				
	Max. Peak Power (dBm)	11.00	13.00	13.00	13.00	15.00
	Max. Peak Power (mW)	12.59	19.95	19.95	19.95	31.62
	Exclusion Threshold (mW)	22.03	22.12	14.34	13.78	13.63
	SAR Test Required	Yes	Yes	Yes	Yes	Yes

Antenna 23

Test Position Configurations	Mode	Bluetooth	2.4G	5.2&3G	5.6G	5.8G
Calculated Frequency(MHz)		2480	2462	5320	5710	5825
Front Side	Distance to User (mm)	5.00				
	Max. Peak Power (dBm)	13.50	13.00	13.00	14.00	16.00
	Max. Peak Power (mW)	22.39	19.95	19.95	25.12	39.81
	Exclusion Threshold (mW)	2.72	2.73	1.47	1.39	1.37
	SAR Test Required	Yes	Yes	Yes	Yes	Yes
Back Side	Distance to User (mm)	5.00				
	Max. Peak Power (dBm)	13.50	13.00	13.00	14.00	16.00
	Max. Peak Power (mW)	22.39	19.95	19.95	25.12	39.81
	Exclusion Threshold (mW)	2.72	2.73	1.47	1.39	1.37
	SAR Test Required	Yes	Yes	Yes	Yes	Yes
Left Edge	Distance to User (mm)	47.00				
	Max. Peak Power (dBm)	13.50	13.00	13.00	14.00	16.00
	Max. Peak Power (mW)	22.39	19.95	19.95	25.12	39.81
	Exclusion Threshold (mW)	193.97	194.41	152.58	149.22	148.29
	SAR Test Required	No	No	No	No	No
Right Edge	Distance to User (mm)	0.50				
	Max. Peak Power (dBm)	13.50	13.00	13.00	14.00	16.00
	Max. Peak Power (mW)	22.39	19.95	19.95	25.12	39.81
	Exclusion Threshold (mW)	0.03	0.03	0.01	0.01	0.01
	SAR Test Required	Yes	Yes	Yes	Yes	Yes
Top Edge	Distance to User (mm)	85.50				
	Max. Peak Power (dBm)	13.50	13.00	13.00	14.00	16.00
	Max. Peak Power (mW)	22.39	19.95	19.95	25.12	39.81
	Exclusion Threshold (mW)	606.36	607.17	526.70	519.87	517.96
	SAR Test Required	No	No	No	No	No
Bottom Edge	Distance to User (mm)	15.00				
	Max. Peak Power (dBm)	13.50	13.00	13.00	14.00	16.00
	Max. Peak Power (mW)	22.39	19.95	19.95	25.12	39.81
	Exclusion Threshold (mW)	22.03	22.12	14.34	13.78	13.63
	SAR Test Required	Yes	Yes	Yes	Yes	Yes

10 TEST RESULT

Note: Refer to ANNEX C for the detailed test data for each test configuration.

10.1 Bluetooth

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	Duty Cycle(%)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Body														
Ant.22	DH5	Front Side	10	78	2480	0.15	0.045	10.24	11.00	1.191	76.94	1.300	0.070	/
	DH5	Back Side	10	78	2480	0.05	0.173	10.24	11.00	1.191	76.94	1.300	**0.268**	1#
	DH5	Left Edge	10	78	2480	0.02	0.166	10.24	11.00	1.191	76.94	1.300	0.257	/
	DH5	Bottom Edge	10	78	2480	0.13	0.070	10.24	11.00	1.191	76.94	1.300	0.108	/
Ant.23	DH5	Front Side	10	0	2402	-0.02	0.044	13.26	13.50	1.057	76.94	1.300	0.060	/
	DH5	Back Side	10	0	2402	0.01	0.147	13.26	13.50	1.057	76.94	1.300	0.202	/
	DH5	Right Edge	10	0	2402	-0.10	0.146	13.26	13.50	1.057	76.94	1.300	0.201	/
	DH5	Bottom Edge	10	0	2402	-0.01	0.057	13.26	13.50	1.057	76.94	1.300	0.078	/

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	Duty Cycle(%)	Scaling Factor	10 g Scaled SAR (W/kg)	Meas. No.
Extremity														
Ant.22	DH5	Front Side	0	78	2480	0.03	0.141	10.24	11.00	1.191	76.94	1.300	0.218	/
	DH5	Back Side	0	78	2480	-0.09	0.278	10.24	11.00	1.191	76.94	1.300	0.430	/
	DH5	Left Edge	0	78	2480	-0.04	0.444	10.24	11.00	1.191	76.94	1.300	**0.687**	2#
	DH5	Bottom Edge	0	78	2480	-0.02	0.053	10.24	11.00	1.191	76.94	1.300	0.082	/
Ant.23	DH5	Front Side	0	0	2402	0.14	0.137	13.26	13.50	1.057	76.94	1.300	0.188	/
	DH5	Back Side	0	0	2402	-0.06	0.321	13.26	13.50	1.057	76.94	1.300	0.441	/
	DH5	Right Edge	0	0	2402	-0.10	0.427	13.26	13.50	1.057	76.94	1.300	0.587	/
	DH5	Bottom Edge	0	0	2402	0.04	0.056	13.26	13.50	1.057	76.94	1.300	0.077	/

10.2WIFI 2.4GHz

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	Duty Cycle(%)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Body														
Ant.22	802.11 b	Front Side	10	1	2412	0.11	0.031	11.73	13.00	1.340	99.00	1.010	0.042	/
	802.11 b	Back Side	10	1	2412	-0.07	0.118	11.73	13.00	1.340	99.00	1.010	0.160	/
	802.11 b	Left Edge	10	1	2412	-0.04	0.113	11.73	13.00	1.340	99.00	1.010	0.153	/
	802.11 b	Bottom Edge	10	1	2412	0.01	0.048	11.73	13.00	1.340	99.00	1.010	0.065	/
Ant.23	802.11 b	Front Side	10	1	2412	0.06	0.030	12.24	13.00	1.191	99.00	1.010	0.036	/
	802.11 b	Back Side	10	1	2412	-0.09	0.100	12.24	13.00	1.191	99.00	1.010	0.120	/
	802.11 b	Right Edge	10	1	2412	-0.13	0.100	12.24	13.00	1.191	99.00	1.010	0.120	/
	802.11 b	Bottom Edge	10	1	2412	0.11	0.039	12.24	13.00	1.191	99.00	1.010	0.047	/
MIMO	802.11 b	Front Side	10	1	2412	-0.02	0.114	15.00	16.00	1.259	99.00	1.010	0.145	/
	802.11 b	Back Side	10	1	2412	-0.08	0.211	15.00	16.00	1.259	99.00	1.010	**0.268**	3#
	802.11 b	Left Edge	10	1	2412	-0.06	0.119	15.00	16.00	1.259	99.00	1.010	0.151	/
	802.11 b	Right Edge	10	1	2412	-0.15	0.128	15.00	16.00	1.259	99.00	1.010	0.163	/
	802.11 b	Bottom Edge	10	1	2412	0.10	0.165	15.00	16.00	1.259	99.00	1.010	0.210	/

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	Duty Cycle(%)	Scaling Factor	10 g Scaled SAR (W/kg)	Meas. No.
Extremity														
Ant.22	802.11 b	Front Side	0	1	2412	-0.14	0.142	11.73	13.00	1.340	99.00	1.010	0.192	/
	802.11 b	Back Side	0	1	2412	-0.04	0.279	11.73	13.00	1.340	99.00	1.010	0.378	/
	802.11 b	Left Edge	0	1	2412	0.08	0.425	11.73	13.00	1.340	99.00	1.010	0.575	/
	802.11 b	Bottom Edge	0	1	2412	0.06	0.054	11.73	13.00	1.340	99.00	1.010	0.073	/
Ant.23	802.11 b	Front Side	0	1	2412	0.03	0.137	12.24	13.00	1.191	99.00	1.010	0.165	/
	802.11 b	Back Side	0	1	2412	0.15	0.322	12.24	13.00	1.191	99.00	1.010	0.387	/
	802.11 b	Right Edge	0	1	2412	0.04	0.428	12.24	13.00	1.191	99.00	1.010	0.515	/
	802.11 b	Bottom Edge	0	1	2412	0.05	0.056	12.24	13.00	1.191	99.00	1.010	0.067	/
MIMO	802.11 b	Front Side	0	1	2412	0.04	0.190	15.00	16.00	1.259	99.00	1.010	0.242	/
	802.11 b	Back Side	0	1	2412	-0.04	0.419	15.00	16.00	1.259	99.00	1.010	0.533	/
	802.11 b	Left Edge	0	1	2412	0.07	0.456	15.00	16.00	1.259	99.00	1.010	**0.580**	4#
	802.11 b	Right Edge	0	1	2412	0.09	0.421	15.00	16.00	1.259	99.00	1.010	0.535	/
	802.11 b	Bottom Edge	0	1	2412	0.01	0.193	15.00	16.00	1.259	99.00	1.010	0.245	/

10.3WIFI 5GHz

Antenna	Band	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	Duty Cycle(%)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Body															
Ant.22	5.3G	802.11 ac (VHT80)	Front Side	10	58	5290	-0.06	0.063	12.08	13.00	1.236	95.00	1.053	0.082	/
	5.3G	802.11 ac (VHT80)	Back Side	10	58	5290	-0.15	0.299	12.08	13.00	1.236	95.00	1.053	0.389	/
	5.3G	802.11 ac (VHT80)	Left Edge	10	58	5290	0.11	0.170	12.08	13.00	1.236	95.00	1.053	0.221	/
	5.3G	802.11 ac (VHT80)	Bottom Edge	10	58	5290	0.04	0.083	12.08	13.00	1.236	95.00	1.053	0.108	/
Ant.23	5.2G	802.11 ac (VHT80)	Front Side	10	42	5210	0.14	0.045	11.66	13.00	1.361	95.00	1.053	0.064	/
	5.2G	802.11 ac (VHT80)	Back Side	10	42	5210	-0.12	0.479	11.66	13.00	1.361	95.00	1.053	0.686	/
	5.2G	802.11 ac (VHT80)	Right Edge	10	42	5210	-0.11	0.354	11.66	13.00	1.361	95.00	1.053	0.507	/
	5.2G	802.11 ac (VHT80)	Bottom Edge	10	42	5210	-0.15	0.121	11.66	13.00	1.361	95.00	1.053	0.173	/
MIMO	5.2G	802.11 ac (VHT80)	Front Side	10	42	5210	-0.03	0.057	15.04	16.00	1.247	95.00	1.053	0.075	/
	5.2G	802.11 ac (VHT80)	Back Side	10	42	5210	0.03	0.524	15.04	16.00	1.247	95.00	1.053	**0.688**	5#
	5.2G	802.11 ac (VHT80)	Left Edge	10	42	5210	0.09	0.177	15.04	16.00	1.247	95.00	1.053	0.232	/
	5.2G	802.11 ac (VHT80)	Right Edge	10	42	5210	-0.12	0.366	15.04	16.00	1.247	95.00	1.053	0.481	/
	5.2G	802.11 ac (VHT80)	Bottom Edge	10	42	5210	0.01	0.124	15.04	16.00	1.247	95.00	1.053	0.163	/
Ant.22	5.6G	802.11 ac (VHT160)	Front Side	10	114	5570	-0.12	0.057	11.36	13.00	1.459	95.00	1.053	0.088	/
	5.6G	802.11 ac (VHT160)	Back Side	10	114	5570	0.12	0.363	11.36	13.00	1.459	95.00	1.053	0.558	/
	5.6G	802.11 ac (VHT160)	Left Edge	10	114	5570	0.01	0.218	11.36	13.00	1.459	95.00	1.053	0.335	/
	5.6G	802.11 ac (VHT160)	Bottom Edge	10	114	5570	-0.06	0.092	11.36	13.00	1.459	95.00	1.053	0.141	/
Ant.23	5.6G	802.11 ac (VHT160)	Front Side	10	114	5570	-0.05	0.057	12.73	14.00	1.340	95.00	1.053	0.080	/
	5.6G	802.11 ac (VHT160)	Back Side	10	114	5570	-0.03	0.333	12.73	14.00	1.340	95.00	1.053	0.470	/
	5.6G	802.11 ac (VHT160)	Right Edge	10	114	5570	-0.03	0.235	12.73	14.00	1.340	95.00	1.053	0.332	/
	5.6G	802.11 ac (VHT160)	Bottom Edge	10	114	5570	0.11	0.100	12.73	14.00	1.340	95.00	1.053	0.141	/
MIMO	5.6G	802.11 ac (VHT160)	Front Side	10	114	5570	0.09	0.053	15.11	16.50	1.377	95.00	1.053	0.077	/
	5.6G	802.11 ac (VHT160)	Back Side	10	114	5570	0.09	0.395	15.11	16.50	1.377	95.00	1.053	**0.573**	6#
	5.6G	802.11 ac (VHT160)	Left Edge	10	114	5570	-0.07	0.237	15.11	16.50	1.377	95.00	1.053	0.344	/
	5.6G	802.11 ac (VHT160)	Right Edge	10	114	5570	-0.05	0.216	15.11	16.50	1.377	95.00	1.053	0.313	/
	5.6G	802.11 ac (VHT160)	Bottom Edge	10	114	5570	0.03	0.108	15.11	16.50	1.377	95.00	1.053	0.157	/
Ant.22	5.8G	802.11 ac (VHT80)	Front Side	10	155	5775	0.10	0.046	13.90	15.00	1.288	95.00	1.053	0.062	/
	5.8G	802.11 ac (VHT80)	Back Side	10	155	5775	-0.13	0.337	13.90	15.00	1.288	95.00	1.053	0.457	/
	5.8G	802.11 ac (VHT80)	Left Edge	10	155	5775	0.05	0.199	13.90	15.00	1.288	95.00	1.053	0.270	/
	5.8G	802.11 ac (VHT80)	Bottom Edge	10	155	5775	0.12	0.114	13.90	15.00	1.288	95.00	1.053	0.155	/
Ant.23	5.8G	802.11 ac (VHT80)	Front Side	10	155	5775	0.05	0.046	15.15	16.00	1.216	95.00	1.053	0.059	/
	5.8G	802.11 ac (VHT80)	Back Side	10	155	5775	0.05	0.340	15.15	16.00	1.216	95.00	1.053	0.435	/
	5.8G	802.11 ac (VHT80)	Right Edge	10	155	5775	0.05	0.279	15.15	16.00	1.216	95.00	1.053	0.357	/
	5.8G	802.11 ac (VHT80)	Bottom Edge	10	155	5775	-0.03	0.104	15.15	16.00	1.216	95.00	1.053	0.133	/
MIMO	5.8G	802.11 ac (VHT80)	Front Side	10	155	5775	-0.13	0.046	17.58	18.50	1.236	95.00	1.053	0.060	/
	5.8G	802.11 ac (VHT80)	Back Side	10	155	5775	0.09	0.399	17.58	18.50	1.236	95.00	1.053	**0.519**	7#

	5.8G	802.11 ac (VHT80)	Left Edge	10	155	5775	0.12	0.302	17.58	18.50	1.236	95.00	1.053	0.393	/
	5.8G	802.11 ac (VHT80)	Right Edge	10	155	5775	0.02	0.293	17.58	18.50	1.236	95.00	1.053	0.381	/
	5.8G	802.11 ac (VHT80)	Bottom Edge	10	155	5775	-0.02	0.114	17.58	18.50	1.236	95.00	1.053	0.148	/

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	Duty Cycle(%)	Scaling Factor	10 g Scaled SAR (W/kg)	Meas. No.
Extremity														
Ant.22	5.3G	802.11 ac (VHT80)	Front Side	0	58	5290	0.07	0.097	12.08	13.00	1.236	95.00	1.053	0.126	/
	5.3G	802.11 ac (VHT80)	Back Side	0	58	5290	0.08	0.437	12.08	13.00	1.236	95.00	1.053	0.569	/
	5.3G	802.11 ac (VHT80)	Left Edge	0	58	5290	0.12	0.331	12.08	13.00	1.236	95.00	1.053	0.431	/
	5.3G	802.11 ac (VHT80)	Bottom Edge	0	58	5290	-0.07	0.067	12.08	13.00	1.236	95.00	1.053	0.087	/
Ant.23	5.2G	802.11 ac (VHT80)	Front Side	0	42	5210	-0.01	0.065	11.66	13.00	1.361	95.00	1.053	0.093	/
	5.2G	802.11 ac (VHT80)	Back Side	0	42	5210	-0.02	0.452	11.66	13.00	1.361	95.00	1.053	0.648	/
	5.2G	802.11 ac (VHT80)	Right Edge	0	42	5210	0.06	0.369	11.66	13.00	1.361	95.00	1.053	0.529	/
	5.2G	802.11 ac (VHT80)	Bottom Edge	0	42	5210	0.06	0.139	11.66	13.00	1.361	95.00	1.053	0.199	/
MIMO	5.2G	802.11 ac (VHT80)	Front Side	0	42	5210	0.12	0.004	15.04	16.00	1.247	95.00	1.053	0.005	/
	5.2G	802.11 ac (VHT80)	Back Side	0	42	5210	0.09	0.495	15.04	16.00	1.247	95.00	1.053	**0.650**	8#
	5.2G	802.11 ac (VHT80)	Left Edge	0	42	5210	0.11	0.229	15.04	16.00	1.247	95.00	1.053	0.301	/
	5.2G	802.11 ac (VHT80)	Right Edge	0	42	5210	0.03	0.338	15.04	16.00	1.247	95.00	1.053	0.444	/
	5.2G	802.11 ac (VHT80)	Bottom Edge	0	42	5210	0.02	0.141	15.04	16.00	1.247	95.00	1.053	0.185	/
Ant.22	5.6G	802.11 ac (VHT160)	Front Side	0	114	5570	0.11	0.030	11.36	13.00	1.459	95.00	1.053	0.046	/
	5.6G	802.11 ac (VHT160)	Back Side	0	114	5570	-0.10	0.523	11.36	13.00	1.459	95.00	1.053	0.803	/
	5.6G	802.11 ac (VHT160)	Left Edge	0	114	5570	0.05	0.345	11.36	13.00	1.459	95.00	1.053	0.530	/
	5.6G	802.11 ac (VHT160)	Bottom Edge	0	114	5570	0.07	0.058	11.36	13.00	1.459	95.00	1.053	0.089	/
Ant.23	5.6G	802.11 ac (VHT160)	Front Side	0	114	5570	-0.05	0.058	12.73	14.00	1.340	95.00	1.053	0.082	/
	5.6G	802.11 ac (VHT160)	Back Side	0	114	5570	0.14	0.575	12.73	14.00	1.340	95.00	1.053	0.811	/
	5.6G	802.11 ac (VHT160)	Right Edge	0	114	5570	-0.14	0.453	12.73	14.00	1.340	95.00	1.053	0.639	/
	5.6G	802.11 ac (VHT160)	Bottom Edge	0	114	5570	0.06	0.060	12.73	14.00	1.340	95.00	1.053	0.085	/
MIMO	5.6G	802.11 ac (VHT160)	Front Side	0	114	5570	0.06	0.058	15.11	16.50	1.377	95.00	1.053	0.084	/
	5.6G	802.11 ac (VHT160)	Back Side	0	114	5570	0.02	0.600	15.11	16.50	1.377	95.00	1.053	**0.870**	9#
	5.6G	802.11 ac (VHT160)	Left Edge	0	114	5570	-0.08	0.315	15.11	16.50	1.377	95.00	1.053	0.457	/
	5.6G	802.11 ac (VHT160)	Right Edge	0	114	5570	0.09	0.453	15.11	16.50	1.377	95.00	1.053	0.657	/
	5.6G	802.11 ac (VHT160)	Bottom Edge	0	114	5570	-0.02	0.068	15.11	16.50	1.377	95.00	1.053	0.099	/
Ant.22	5.8G	802.11 ac (VHT80)	Front Side	0	155	5775	0.02	0.053	13.90	15.00	1.288	95.00	1.053	0.072	/
	5.8G	802.11 ac (VHT80)	Back Side	0	155	5775	0.04	0.466	13.90	15.00	1.288	95.00	1.053	0.632	/
	5.8G	802.11 ac (VHT80)	Left Edge	0	155	5775	-0.14	0.355	13.90	15.00	1.288	95.00	1.053	0.481	/
	5.8G	802.11 ac (VHT80)	Bottom Edge	0	155	5775	-0.10	0.064	13.90	15.00	1.288	95.00	1.053	0.087	/
Ant.23	5.8G	802.11 ac (VHT80)	Front Side	0	155	5775	0.15	0.066	15.15	16.00	1.216	95.00	1.053	0.085	/
	5.8G	802.11 ac (VHT80)	Back Side	0	155	5775	0.07	0.692	15.15	16.00	1.216	95.00	1.053	0.886	/
	5.8G	802.11 ac (VHT80)	Right Edge	0	155	5775	0.14	0.423	15.15	16.00	1.216	95.00	1.053	0.542	/
	5.8G	802.11 ac (VHT80)	Bottom Edge	0	155	5775	-0.14	0.061	15.15	16.00	1.216	95.00	1.053	0.078	/

MIMO	5.8G	802.11 ac (VHT80)	Front Side	0	155	5775	0.00	0.063	17.58	18.50	1.236	95.00	1.053	0.082	/
	5.8G	802.11 ac (VHT80)	Back Side	0	155	5775	0.07	0.692	17.58	18.50	1.236	95.00	1.053	**0.901**	10#
	5.8G	802.11 ac (VHT80)	Left Edge	0	155	5775	0.08	0.294	17.58	18.50	1.236	95.00	1.053	0.383	/
	5.8G	802.11 ac (VHT80)	Right Edge	0	155	5775	0.13	0.400	17.58	18.50	1.236	95.00	1.053	0.521	/
	5.8G	802.11 ac (VHT80)	Bottom Edge	0	155	5775	0.06	0.066	17.58	18.50	1.236	95.00	1.053	0.086	/

11 SAR Measurement Variability

According to KDB 865664 D01, SAR measurement variability was assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. Alternatively, if the highest measured SAR for both head and body tissue-equivalent media are ≤ 1.45 W/kg and the ratio of these highest SAR values, i.e., largest divided by smallest value, is ≤ 1.10, the highest SAR configuration for either head or body tissue-equivalent medium may be used to perform the repeated measurement. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR repeated measurement procedure:

1. When the highest measured SAR is < 0.80 W/kg, repeated measurement is not required.
2. When the highest measured SAR is >= 0.80 W/kg, repeat that measurement once.
3. If the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20, or when the original or repeated measurement is >= 1.45 W/kg, perform a second repeated measurement.
4. If the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20, and the original, first or second repeated measurement is >= 1.5 W/kg, perform a third repeated measurement.

Note: For product Extremity10g SAR, the highest measured 10g SAR is 0.692 < 2.0 W/kg, repeated measurement is not required.

12 SIMULTANEOUS TRANSMISSION

Note: This product has only one antenna for BT/WLAN, so simultaneous transmission evaluation is not required in this report.

13 TEST EQUIPMENTS LIST

Description	Manufacturer	Model	Serial No./Version	Cal. Date	Cal. Due
PC	Dell	N/A	N/A	N/A	N/A
Test Software	Speag	DASY5	52.8.8.1222	N/A	N/A
2450MHz Validation Dipole	Speag	D2450V2	SN: 952	2024/05/07	2027/05/06
5GHz Validation Dipole	Speag	D5GHzV2	SN: 1200	2024/05/09	2027/05/08
Data Acquisition Electronics	Speag	DAE4	SN: 878	2025/03/05	2026/03/04
E-Field Probe	Speag	EX3DV4	SN: 7510	2024/06/25	2025/06/24
Signal Generator	R&S	SMB100A	177746	2024/04/24	2025/04/23
Power Meter	R&S	NRVD-B2	835843/014	2024/08/08	2025/08/07
Power Sensor	R&S	NRV-Z4	100381	2024/08/08	2025/08/07
Power Sensor	R&S	NRV-Z2	100211	2024/08/08	2025/08/07
Network Analyzer	Agilent	E5071C	MY46103472	2024/09/11	2025/09/10
Thermometer	Elitech	RC-4HC	EF7216002985	2024/10/31	2025/10/30
Thermometer	Elitech	RC-4HC	EF720B004811	2024/10/31	2025/10/30
Power Amplifier	Mini-Circuits	ZVA-183W-S+	932502132	N/A	N/A
Dielectric Probe Kit	Speag	DAK3.5	SN: 1312	N/A	N/A
Phantom	Speag	SAM	SN: 1576	N/A	N/A
Attenuator	COM-MW	ZA-S1-31	1305003187	N/A	N/A
Directional coupler	AA-MCS	AAMCS-UDC	000272	N/A	N/A

Note: For dipole antennas, BALUN has adopted 3 years as calibration intervals, and on annual basis, every measurement dipole has been evaluated and is in compliance with the following criteria:

1. There is no physical damage on the dipole;
2. System validation with specific dipole is within 10% of calibrated value;
3. Return-loss in within 20% of calibrated measurement.
4. Impedance (real or imaginary parts) in within 5 Ohms of calibrated measurement.

ANNEX A SIMULATING LIQUID VERIFICATION RESULT

The dielectric parameters of the liquids were verified prior to the SAR evaluation using a DAK3.5 Dielectric Probe Kit.

Head Liquid

Date	Liquid Type	Fre. (MHz)	Temp. (℃)	Meas. Conductivity (σ) (S/m)	Meas. Permittivity (ε)	Target Conductivity (σ) (S/m)	Target Permittivity (ε)	Conductivity Tolerance (%)	Permittivity Tolerance (%)
2025.04.12	Head	2450	21.3	1.81	38.89	1.80	39.20	0.56	-0.79
2025.04.13	Head	5250	21.5	4.61	36.74	4.71	35.93	-2.12	2.25
2025.04.14	Head	5600	21.7	5.20	35.56	5.07	35.53	2.56	0.08
2025.04.15	Head	5750	21.6	5.34	36.26	5.22	35.36	2.30	2.55
Note: The tolerance limit of Conductivity and Permittivity is± 5%.									

ANNEX B SYSTEM CHECK RESULT

Comparing to the original SAR value provided by SPEAG, the validation data should be within itsspecification of 10 %.

Head liquid 1g

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)
2025.04.12	Head	2450	100	5.34	53.40	52.60	1.52
2025.04.13	Head	5250	100	7.63	76.30	77.70	-1.80
2025.04.14	Head	5600	100	8.34	83.40	81.30	2.58
2025.04.15	Head	5750	100	7.65	76.50	77.60	-1.42
Note: The tolerance limit of System validation ±10%.							

Head liquid 10g

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)
2025.04.12	Head	2450	100	2.43	24.30	24.70	-1.62
2025.04.13	Head	5250	100	2.16	21.60	22.00	-1.82
2025.04.14	Head	5600	100	2.38	23.80	23.10	3.03
2025.04.15	Head	5750	100	2.17	21.70	21.90	-0.91
Note: The tolerance limit of System validation ±10%.							

System Performance Check Data (2450MHz)

Date: 2025.04.12

Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; σ = 1.814 S/m; ε_r = 38.891; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.1℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.75, 7.75, 7.75); Calibrated: 2024.06.25;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025.03.05
- Phantom: SAM ; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 2450 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 6.33 W/kg

CW 2450 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 50.56 V/m; Power Drift = -0.07 dB

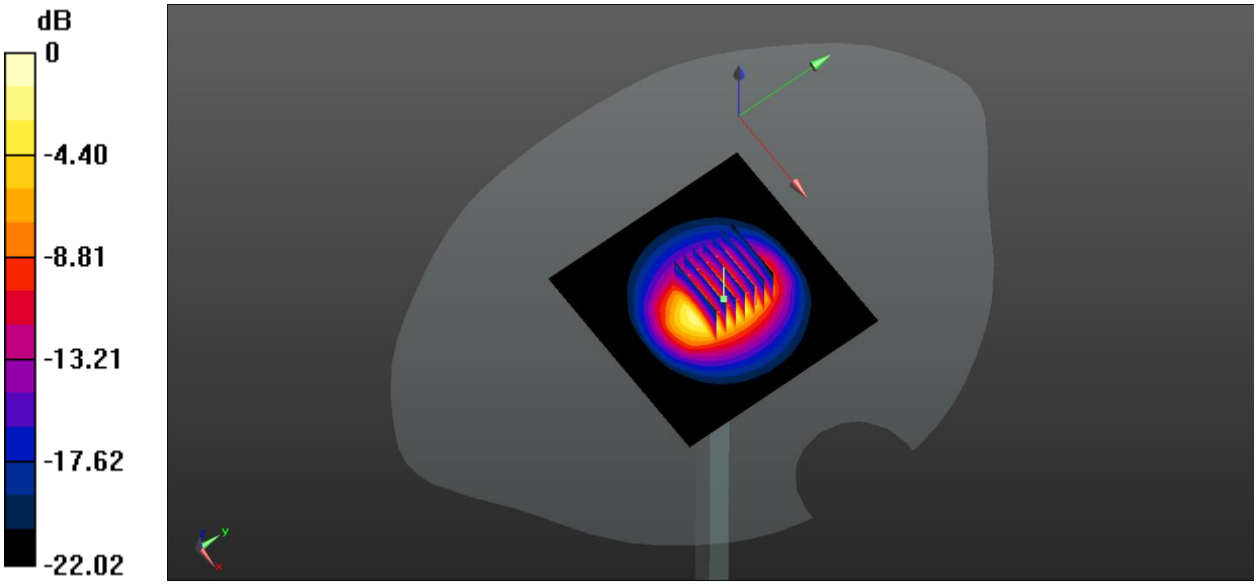
Peak SAR (extrapolated) = 10.6 W/kg

SAR(1 g) = 5.34 W/kg; SAR(10 g) = 2.43 W/kg

Smallest distance from peaks to all points 3 dB below = 10.8 mm

Ratio of SAR at M2 to SAR at M1 = 61%

Maximum value of SAR (measured) = 6.49 W/kg



0 dB = 6.49 W/kg

System Performance Check Data (5250MHz)

Date: 2025.04.13
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.609 S/m; ε_r = 36.737; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.4℃ Liquid Temperature:21.5℃

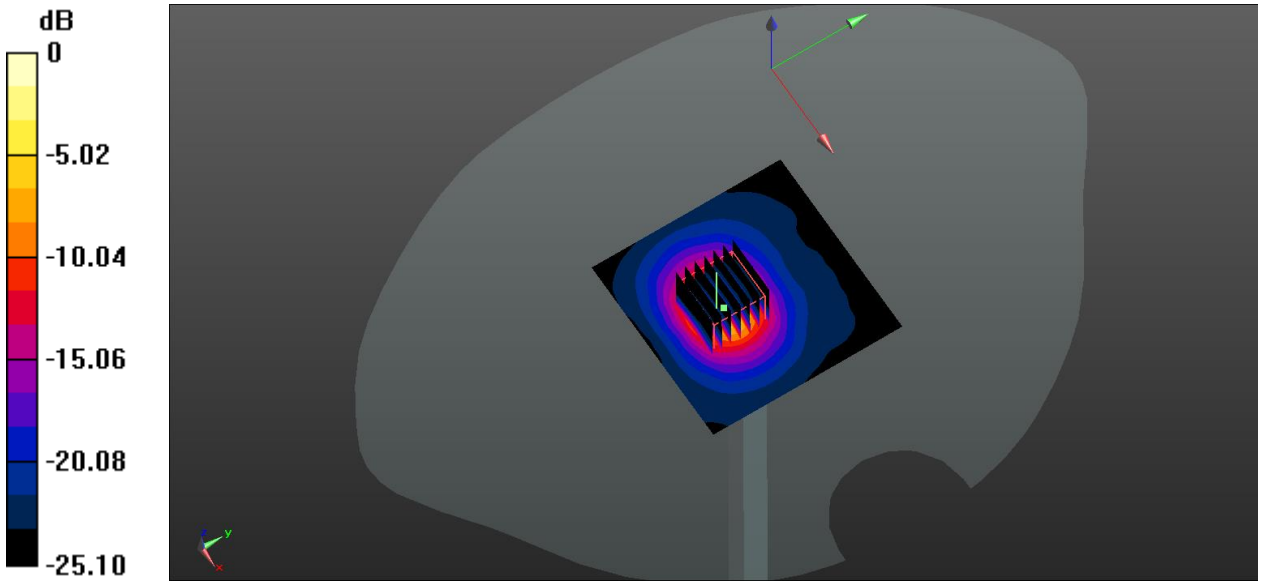
DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.74, 5.74, 5.74); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025.03.05
- Phantom: SAM ; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 5250 100mW/Area Scan (81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 7.64 W/kg

CW 5250 100mW/Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 31.15 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 31.1 W/kg
SAR(1 g) = 7.63 W/kg; SAR(10 g) = 2.16 W/kg

Smallest distance from peaks to all points 3 dB below = 9.1 mm
Ratio of SAR at M2 to SAR at M1 = 57.3%
Maximum value of SAR (measured) = 14.4 W/kg



0 dB = 14.4 W/kg

System Performance Check Data (5600MHz)

Date: 2025.04.14

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5600 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5600 MHz; σ = 5.195 S/m; ε_r = 35.562; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.6℃ Liquid Temperature:21.7℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5, 5, 5); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025.03.05
- Phantom: SAM ; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 5600 100mW /Area Scan (81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 8.94 W/kg

CW 5600 100mW /Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 31.21 V/m; Power Drift = -0.09 dB

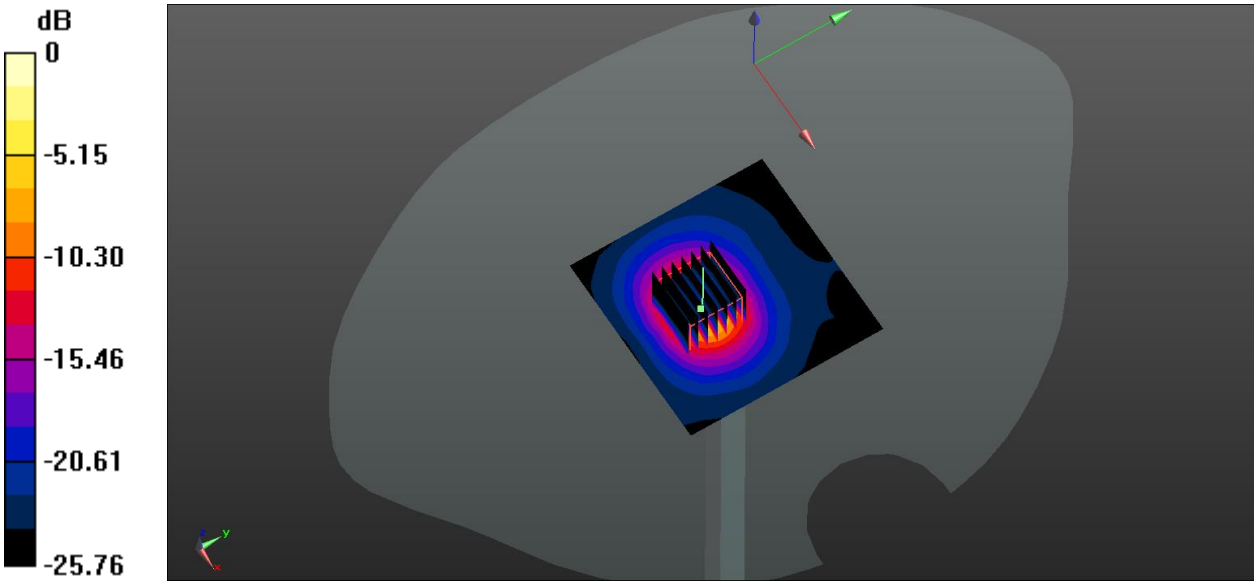
Peak SAR (extrapolated) = 37.8 W/kg

SAR(1 g) = 8.34 W/kg; SAR(10 g) = 2.38 W/kg

Smallest distance from peaks to all points 3 dB below = 9.3 mm

Ratio of SAR at M2 to SAR at M1 = 56.6%

Maximum value of SAR (measured) = 14.5 W/kg



0 dB = 14.5 W/kg

System Performance Check Data (5750MHz)

Date: 2025.04.15

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5750 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5750 MHz; σ = 5.337 S/m; ε_r = 36.259; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.6℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.04, 5.04, 5.04); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025.03.05
- Phantom: SAM ; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 5750 100mW/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 8.87 W/kg

CW 5750 100mW/Zoom Scan (7x7x21)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 32.84 V/m; Power Drift = 0.04 dB

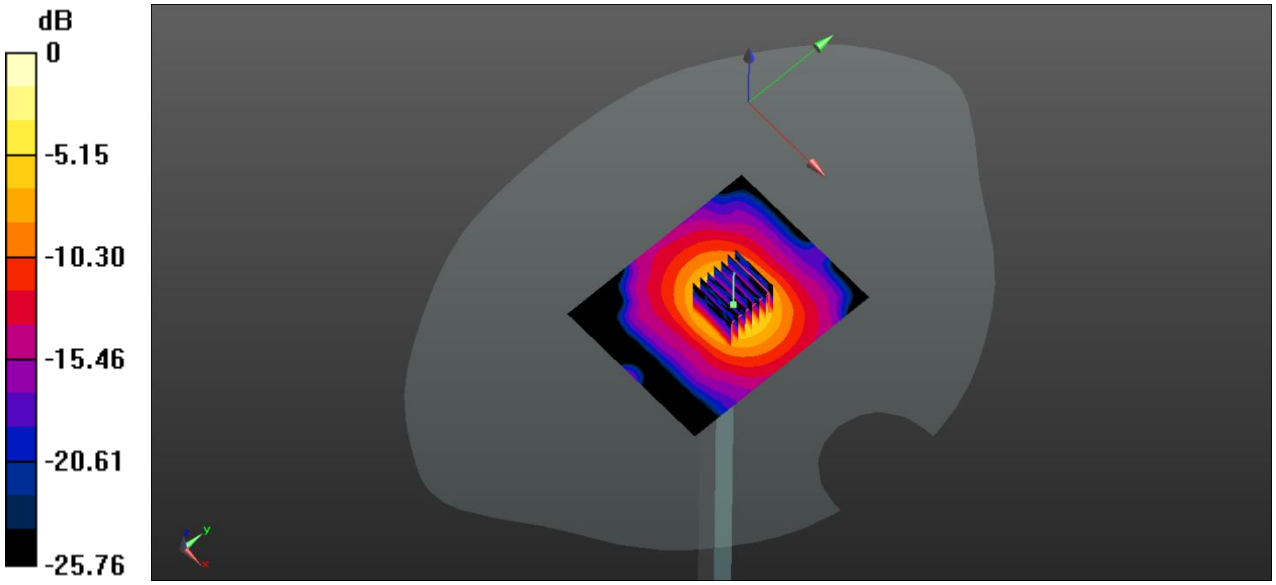
Peak SAR (extrapolated) = 39.8 W/kg

SAR(1 g) = 7.65 W/kg; SAR(10 g) = 2.17 W/kg

Smallest distance from peaks to all points 3 dB below = 9.1 mm

Ratio of SAR at M2 to SAR at M1 = 56.4%

Maximum value of SAR (measured) = 19.8 W/kg



0 dB = 19.8 W/kg

ANNEX C TEST DATA

Meas.1 Body Plane with Back Side 10mm on 78 Channel in Bluetooth mode with Antenna 22

Date: 2025.04.12

Communication System Band: BT; Frequency: 2480 MHz;Duty Cycle: 1:1.3

Medium parameters used (interpolated): f = 2480 MHz; σ = 1.848 S/m; ε_r = 38.347; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.1℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.75, 7.75, 7.75); Calibrated: 2024.06.25;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025.03.05
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch78/Area Scan (81x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.185 W/kg

Ch78/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.348 V/m; Power Drift = 0.05 dB

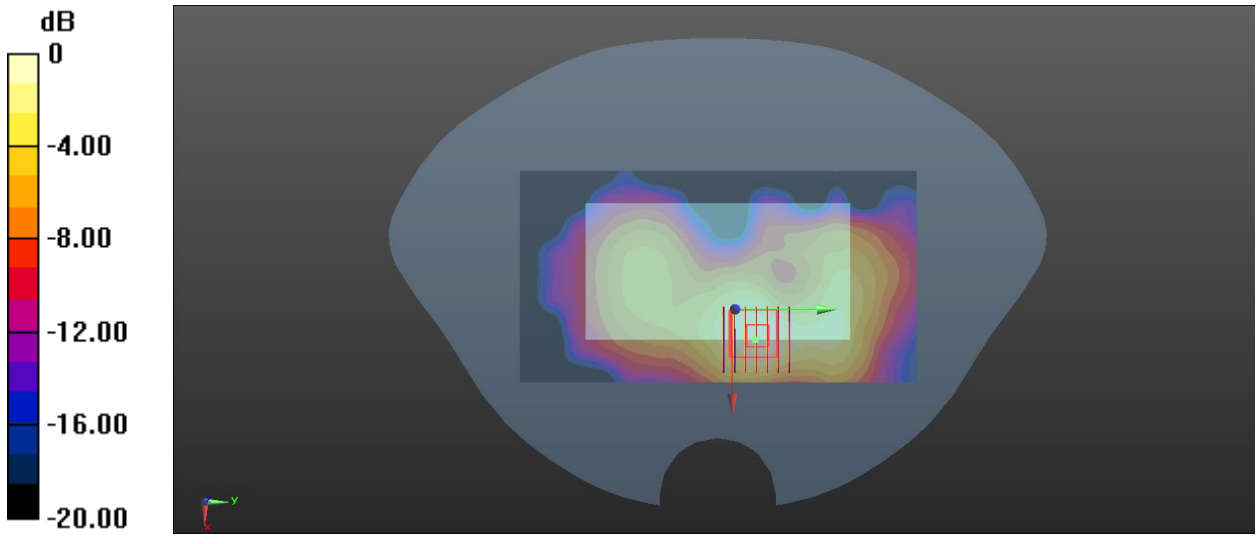
Peak SAR (extrapolated) = 0.305 W/kg

SAR(1 g) = 0.173 W/kg; SAR(10 g) = 0.094 W/kg

Smallest distance from peaks to all points 3 dB below = 14.1 mm

Ratio of SAR at M2 to SAR at M1 = 57.5%

Maximum value of SAR (measured) = 0.190 W/kg



0 dB = 0.190 W/kg

Meas.2 Body Plane with Left Edge 0mm on 78 Channel in Bluetooth mode with Antenna 22

Date: 2025.04.12

Communication System Band: BT; Frequency: 2480 MHz;Duty Cycle: 1:1.3

Medium parameters used (interpolated): f = 2480 MHz; σ = 1.848 S/m; ε_r = 38.347; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.1℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.75, 7.75, 7.75); Calibrated: 2024.06.25;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025.03.05
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch78/Area Scan (61x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.21 W/kg

Ch78/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.19 V/m; Power Drift = -0.04 dB

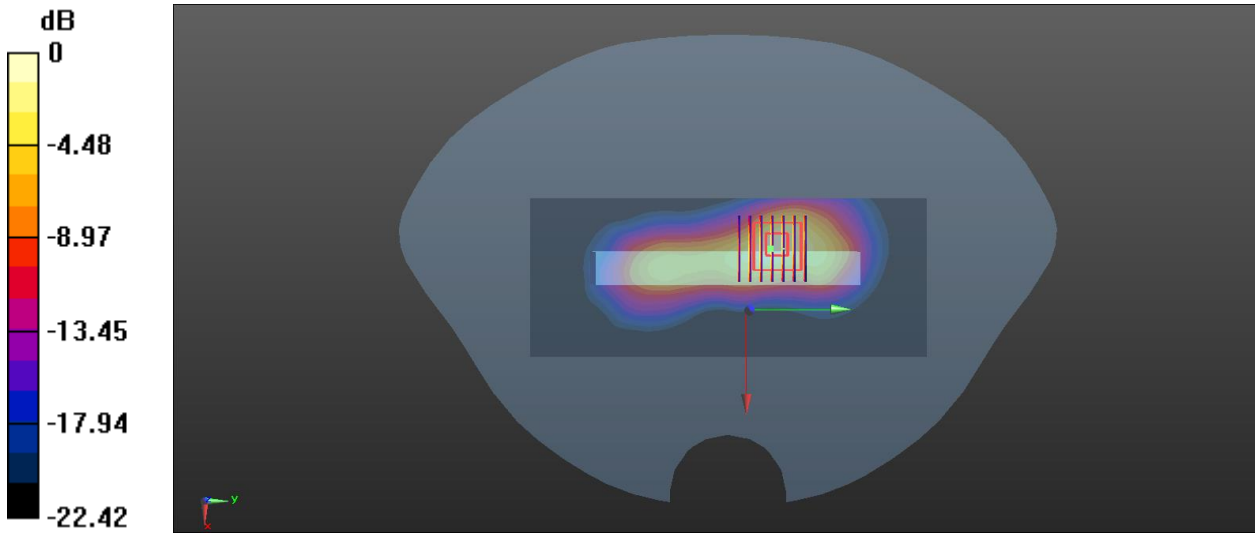
Peak SAR (extrapolated) = 2.70 W/kg

SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.444 W/kg

Smallest distance from peaks to all points 3 dB below = 7.6 mm

Ratio of SAR at M2 to SAR at M1 = 45.7%

Maximum value of SAR (measured) = 1.24 W/kg



0 dB = 1.24 W/kg

Meas.3 Body Plane with Back Side 10mm on 1 Channel in IEEE802.11b mode with Antenna MIMO

Date: 2025.04.12

Communication System Band: 2.4G; Frequency: 2412 MHz;Duty Cycle: 1:1.01

Medium parameters used (interpolated): f = 2412 MHz; σ = 1.78 S/m; ε_r = 39.001; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.1℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.75, 7.75, 7.75); Calibrated: 2024.06.25;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025.03.05
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch1/Area Scan (81x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.229 W/kg

Ch1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.642 V/m; Power Drift = -0.08 dB

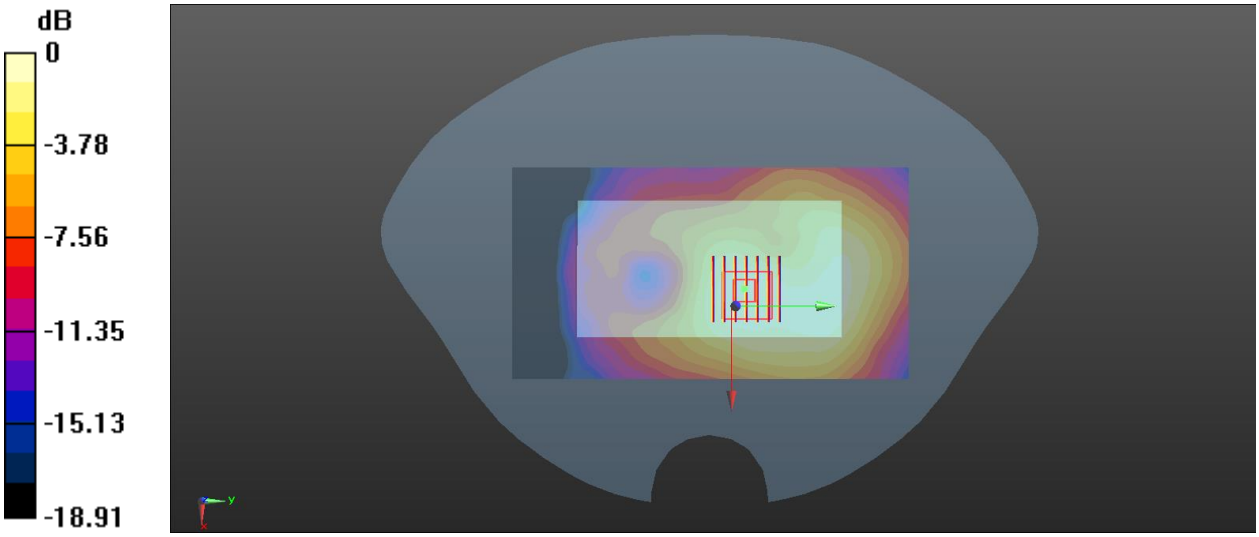
Peak SAR (extrapolated) = 0.352 W/kg

SAR(1 g) = 0.211 W/kg; SAR(10 g) = 0.122 W/kg

Smallest distance from peaks to all points 3 dB below = 17.1 mm

Ratio of SAR at M2 to SAR at M1 = 60.1%

Maximum value of SAR (measured) = 0.232 W/kg



0 dB = 0.232 W/kg

Meas.4 Body Plane with Left Edge 0mm on 1 Channel in IEEE802.11b mode with Antenna MIMO

Date: 2025.04.12

Communication System Band: 2.4G; Frequency: 2412 MHz;Duty Cycle: 1:1.01

Medium parameters used (interpolated): f = 2412 MHz; σ = 1.78 S/m; ε_r = 39.001; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.1℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.75, 7.75, 7.75); Calibrated: 2024.06.25;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025.03.05
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch1/Area Scan (61x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.27 W/kg

Ch1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.71 V/m; Power Drift = 0.07 dB

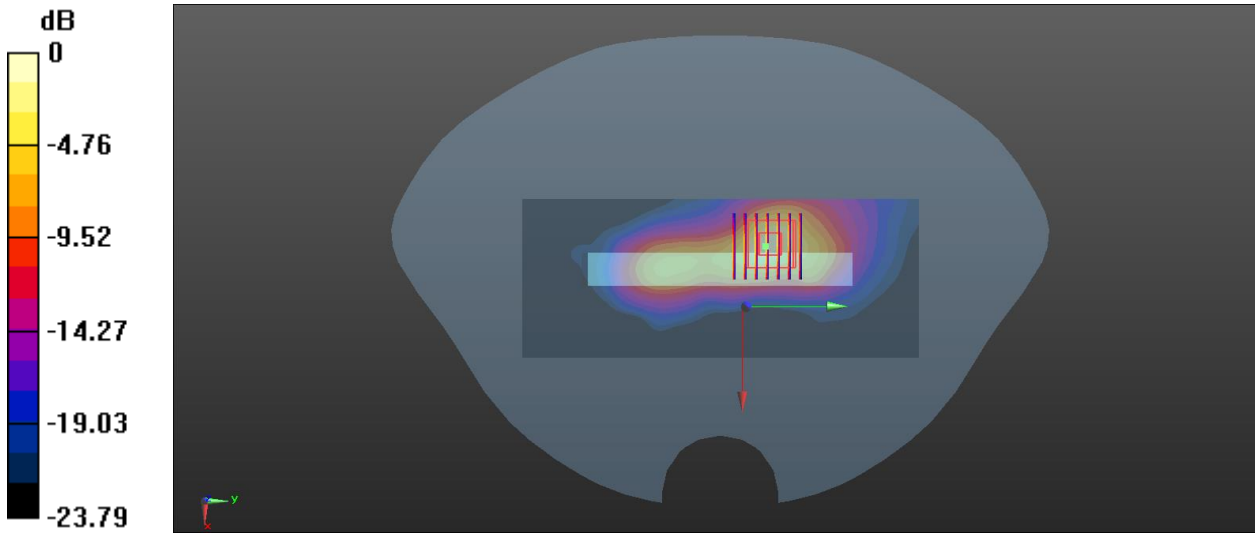
Peak SAR (extrapolated) = 2.83 W/kg

SAR(1 g) = 1.16 W/kg; SAR(10 g) = 0.456 W/kg

Smallest distance from peaks to all points 3 dB below = 7.8 mm

Ratio of SAR at M2 to SAR at M1 = 45%

Maximum value of SAR (measured) = 1.38 W/kg



0 dB = 1.38 W/kg

Meas.5 Body Plane with Back Side 10mm on 42 Channel in IEEE802.11ac80 mode with Antenna MIMO

Date: 2025.04.13

Communication System Band: 5.2G; Frequency: 5210 MHz;Duty Cycle: 1:1.053

Medium parameters used (interpolated): f = 5210 MHz; σ = 4.586 S/m; ε_r = 37.109; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4℃ Liquid Temperature:21.5℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.74, 5.74, 5.74); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025.03.05
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch42/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.873 W/kg

Ch42/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.502 V/m; Power Drift = 0.03 dB

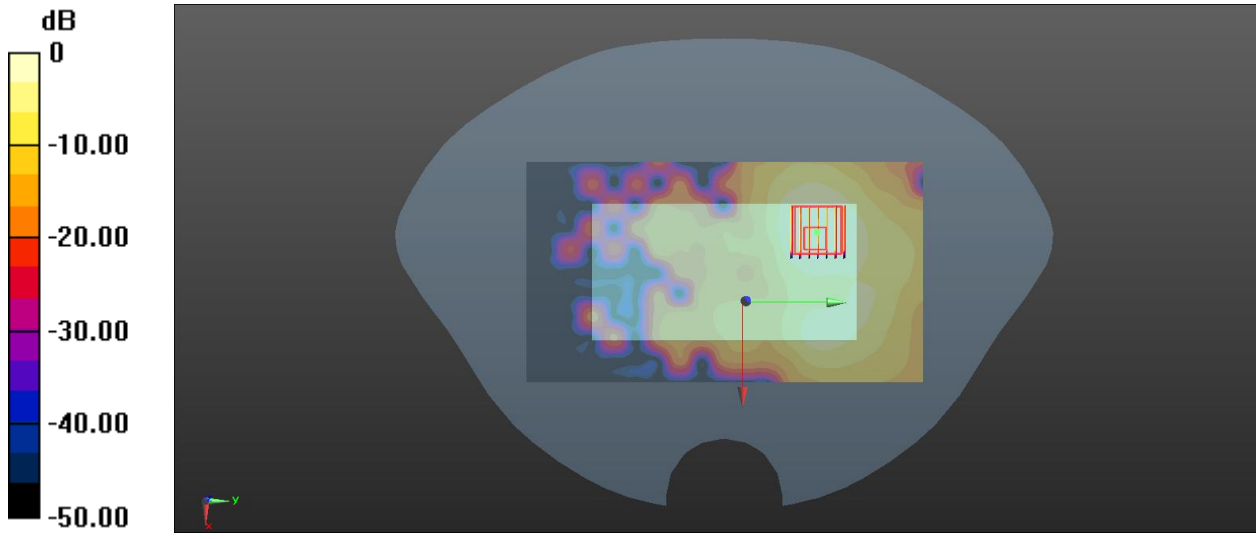
Peak SAR (extrapolated) = 2.50 W/kg

SAR(1 g) = 0.524 W/kg; SAR(10 g) = 0.188 W/kg

Smallest distance from peaks to all points 3 dB below = 4.3 mm

Ratio of SAR at M2 to SAR at M1 = 56.6%

Maximum value of SAR (measured) = 0.873 W/kg



0 dB = 0.873 W/kg

Meas.6 Body Plane with Back Side 10mm on 114 Channel in IEEE802.11ac160 mode with Antenna MIMO

Date: 2025.04.14

Communication System Band: 5.6G; Frequency: 5570 MHz;Duty Cycle: 1:1.053

Medium parameters used (interpolated): f = 5570 MHz; σ = 5.128 S/m; ε_r = 36.685; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.6℃ Liquid Temperature:21.7℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5, 5, 5); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025.03.05
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch114/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.797 W/kg

Ch114/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.108 V/m; Power Drift = 0.09 dB

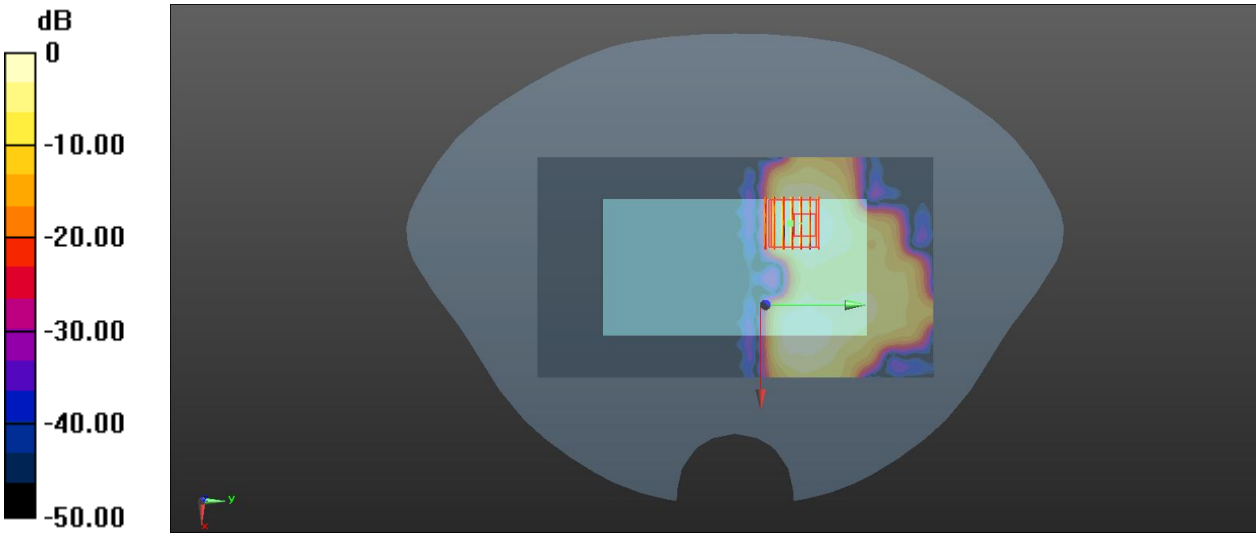
Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 0.395 W/kg; SAR(10 g) = 0.135 W/kg

Smallest distance from peaks to all points 3 dB below = 8.6 mm

Ratio of SAR at M2 to SAR at M1 = 55%

Maximum value of SAR (measured) = 0.754 W/kg



0 dB = 0.754 W/kg

Meas.7 Body Plane with Back Side 10mm on 155 Channel in IEEE802.11ac80 mode with Antenna MIMO

Date: 2025.04.15

Communication System Band: 5.8G; Frequency: 5775 MHz;Duty Cycle: 1:1.053

Medium parameters used (interpolated): f = 5775 MHz; σ = 5.366 S/m; ε_r = 34.228; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.6℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.04, 5.04, 5.04); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025.03.05
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch155/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.805 W/kg

Ch155/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.195 V/m; Power Drift = 0.09 dB

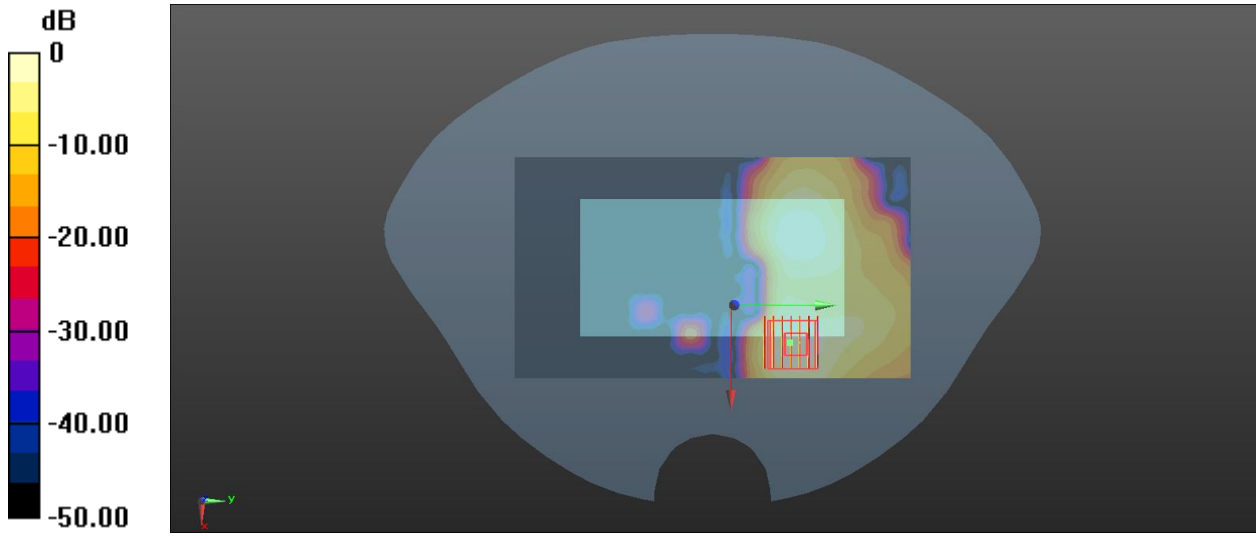
Peak SAR (extrapolated) = 1.63 W/kg

SAR(1 g) = 0.399 W/kg; SAR(10 g) = 0.136 W/kg

Smallest distance from peaks to all points 3 dB below = 10.1 mm

Ratio of SAR at M2 to SAR at M1 = 52.2%

Maximum value of SAR (measured) = 0.762 W/kg



0 dB = 0.762 W/kg

Meas.8 Body Plane with Back Side 0mm on 42 Channel in IEEE802.11ac80 mode with Antenna MIMO

Date: 2025.04.13

Communication System Band: 5.2G; Frequency: 5210 MHz;Duty Cycle: 1:1.053

Medium parameters used (interpolated): f = 5210 MHz; σ = 4.586 S/m; ε_r = 37.109; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4℃ Liquid Temperature:21.5℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.74, 5.74, 5.74); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025.03.05
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch42/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 4.71 W/kg

Ch42/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.518 V/m; Power Drift = 0.09 dB

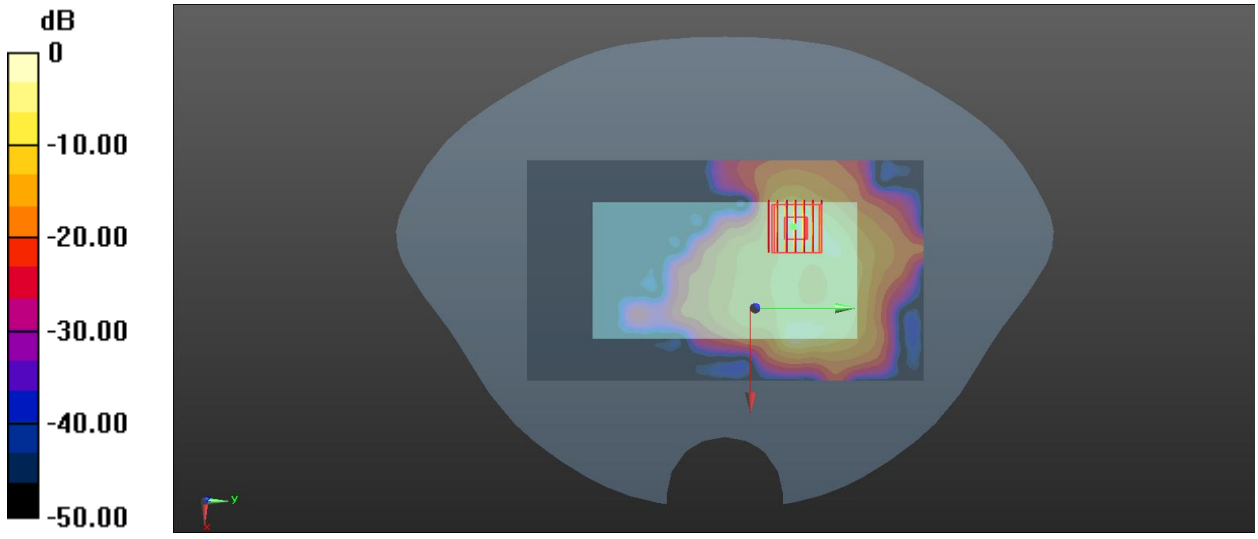
Peak SAR (extrapolated) = 10.5 W/kg

SAR(1 g) = 2.11 W/kg; SAR(10 g) = 0.495 W/kg

Smallest distance from peaks to all points 3 dB below = 4.7 mm

Ratio of SAR at M2 to SAR at M1 = 56%

Maximum value of SAR (measured) = 4.73 W/kg



0 dB = 4.73 W/kg

Meas.9 Body Plane with Back Side 0mm on 114 Channel in IEEE802.11ac160 mode with Antenna MIMO

Date: 2025.04.14

Communication System Band: 5.6G; Frequency: 5570 MHz;Duty Cycle: 1:1.053

Medium parameters used (interpolated): f = 5570 MHz; σ = 5.128 S/m; ε_r = 36.685; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.6℃ Liquid Temperature:21.7℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5, 5, 5); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025.03.05
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch114/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 5.70 W/kg

Ch114/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.730 V/m; Power Drift = 0.02 dB

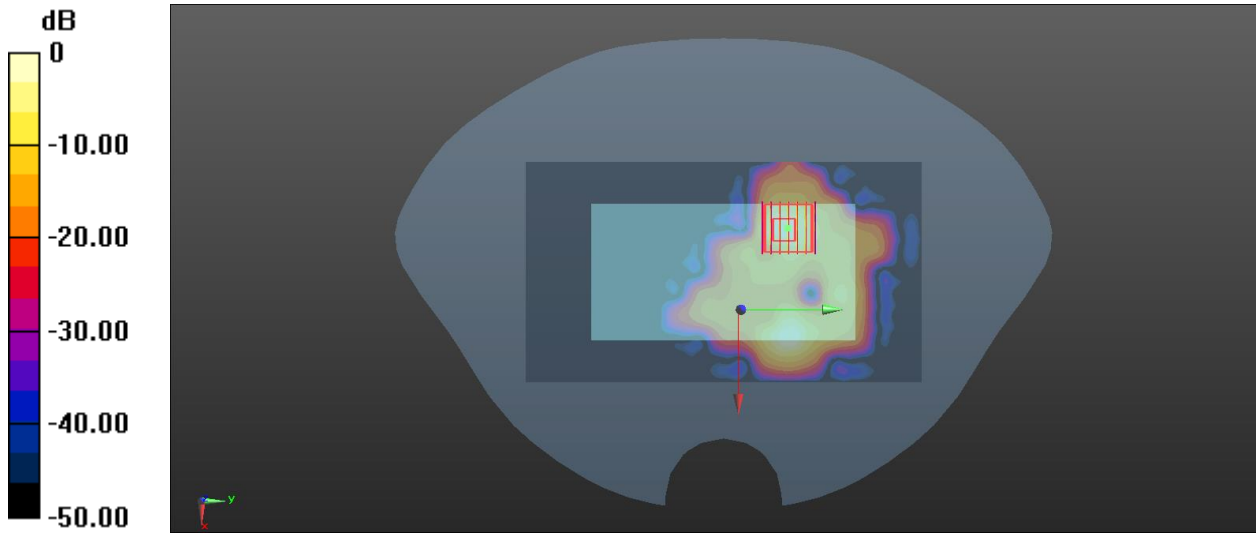
Peak SAR (extrapolated) = 12.7 W/kg

SAR(1 g) = 2.55 W/kg; SAR(10 g) = 0.600 W/kg

Smallest distance from peaks to all points 3 dB below = 4.7 mm

Ratio of SAR at M2 to SAR at M1 = 54.3%

Maximum value of SAR (measured) = 5.75 W/kg



0 dB = 5.75 W/kg

Meas.10 Body Plane with Back Side 0mm on 155 Channel in IEEE802.11ac80 mode with Antenna MIMO

Date: 2025.04.15

Communication System Band: 5.8G; Frequency: 5775 MHz;Duty Cycle: 1:1.053

Medium parameters used (interpolated): f = 5775 MHz; σ = 5.366 S/m; ε_r = 34.228; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.6℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.04, 5.04, 5.04); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025.03.05
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch155/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 7.09 W/kg

Ch155/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.830 V/m; Power Drift = 0.07 dB

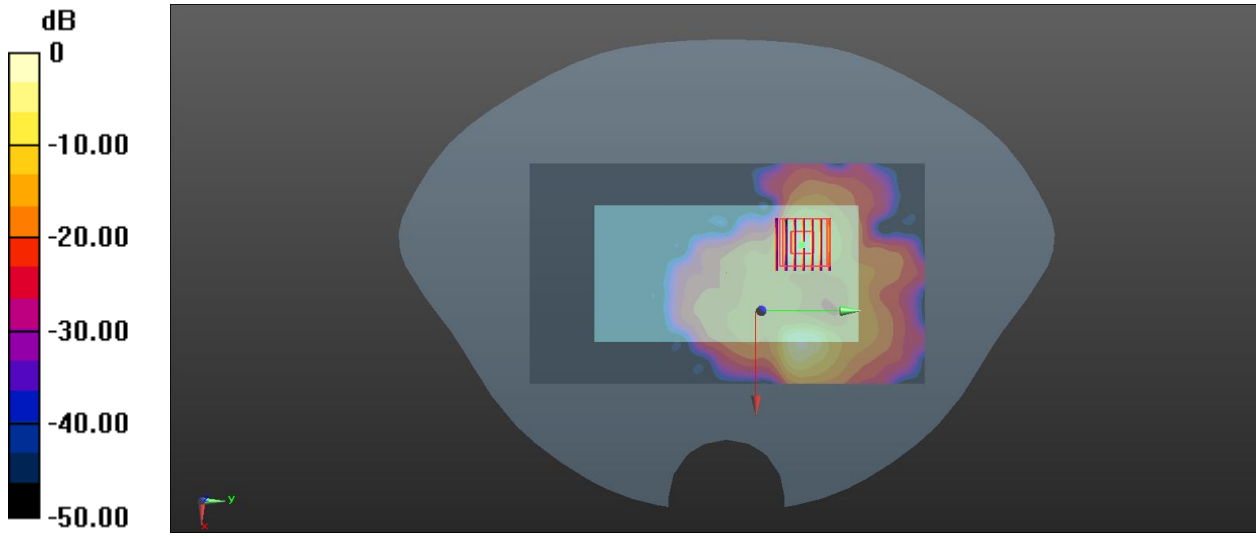
Peak SAR (extrapolated) = 19.7 W/kg

SAR(1 g) = 3.44 W/kg; SAR(10 g) = 0.692 W/kg

Smallest distance from peaks to all points 3 dB below = 4.8 mm

Ratio of SAR at M2 to SAR at M1 = 50%

Maximum value of SAR (measured) = 8.84 W/kg



0 dB = 8.84 W/kg

ANNEX D EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2531139-AW.pdf”.

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document “BL-SZ2531139-AS.pdf”.

ANNEX F CALIBRATION REPORT

Please refer the document “BL-SZ2531139-AC.pdf”.

ANNEX G TUNE-UP PROCEDURE

Please refer the document “BL-SZ2531139-AT.pdf”.

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